

THE
MEDICAL REPOSITORY.

VOL. VIII.

NEW SERIES.

No. II.

ORIGINAL ESSAYS.

Notes Explanatory and Illustrative of the New Italian Doctrine, appended to the Lecture on this subject, published in the preceding number of this Journal. By M. TOMMASINI, Professor. From the French of VANDERLINDEN.

(1.) In the historical part of my *Researches on Diathesis*, I had occasion to show, that the best informed practitioners of preceding ages, even from the time of Hippocrates, have constantly had in view the diathetic division of general diseases. It seems to me, indeed, that the very nature of the subject, led them all to adopt those distinctions in the morbid condition, which correspond to the present received ideas on diathesis.

(2.) My work on *Diathesis*, which is here referred to, and the principal parts of which have been communicated to my pupils at different times during the preceding academic year, was partly printed three years ago, by Paganini, at Parma, but whilst it was in press, I made some important alterations in the doctrines ; so that I afterwards thought it better to give the work a more extended character, which determined me

at that time to suspend its publication. It is now finished, and will be shortly published.

(3.) There has been for some time past, so much clamour raised against the *new* medical doctrines, and the changes which they have produced in the practice of our art, and they have been censured in so many different ways, (which has arisen, in general, from imperfectly comprehending them), that many physicians, and especially the junior part of the profession, often find themselves greatly perplexed when called upon to treat a difficult and dangerous disease. For this reason I have thought it necessary to show the public, that the practice founded on the new principles, does not differ so widely from that adopted by the most esteemed ancient physicians as is commonly thought; and, that when it does differ from their method the most, it is only by adopting a greater simplicity in the practical precepts, and of consistency in the plan of treatment.

(4.) In my Lectures on Diathesis, which I have just cited, I have clearly pointed out all which medical philosophy owes to John Brown, and the acknowledgments which this great man merits for his profound general ideas on life, health, and disease, and for the importance which he attached to the study of diathesis. And although it be true, as I think it is, that Hoffmann, Baglivi, and Cullen did, as it were, prepare the way for the admission of principles which Brown had the perspicacity afterwards to discover and inculcate, it may, nevertheless, be contended, that without the *Elements* of the Edinburgh professor, the fundamental principles of the present doctrine would not have been discovered, and that no one would even have conceived the idea of this modern reform.

(5.) When, in the first years of my practice, I was a partisan, although not without some doubts, of the curative method of Brown, I remember to have frequently asked myself

the explanation of many practical contradictions, which I was not able to give; to have found myself embarrassed to account for a great number of fortunate recoveries, which those who did not follow Brown's method, obtained by means directly opposed to ours, and to have been confounded in seeing some empirics, by means of their powders, decoctions, and pills, for the most part purgative or drastic, cure obstinate diseases, which Brown's doctrine taught to be curable only by means of excitants and opium. See what I have said on this subject in my *Researches on the American Fever*, § 92.

(6.) It was sufficient for the Brunonians for a disease, even sthenic in its commencement, to go beyond certain limits, or become chronic or slow in its progress, to declare that it had passed from the sthenic diathesis into indirect debility; because they believed the excitability to be exhausted by continued pain, or by protracted febrile excitation. But the practice of the ancients had already shown, and daily observation confirms it, that in many diseases, even of very long continuance, we derive great advantages from the depressing method of treatment, (formerly designated by the terms *resolvent*, *emollient*, &c.) and that often, this is the only method which can, if not overcome, at least moderate the symptoms of many chronic infirmities, and arrest their progress. Phthisis may be instanced as a proof of this assertion.

(7.) I have already observed, in my *Lectures on Diathesis*, that this term is at present used in a sense entirely conventional; for the important idea which we attach to the term *diathesis*, since its employment by Brown, is much more extensive than the etymology of the word would warrant.

(8.) When towards the end of the year 1806, I supported in the Academy of Parma the theory of contra-stimulus, and its application to practice, it was objected to me, that the ideas

which I advocated were not those of the illustrious Rasori, and that the exact doctrine of this author was still entirely unknown. Indeed, it was not my intention to expound the theoretical principles, still unknown, of my illustrious fellow-citizen, neither did I pretend to frame a doctrine of my own. In regarding the state of *prostration* (*frisson ou l'abattement*) of the fibre as the effect of contra-stimulant powers, and, on the contrary, the *turgescence, tension* and *re-action* of the fibre as the effects of stimulants, I merely meant to show that these two manifestly opposite phenomena, do take place in the state of health from the application of their respective agents ; and thus to offer an example of the direct opposition of *positive* effects, from powers equally *positive* applied to the fibre. In the meantime, I waited with impatience the publication of the doctrine of contra-stimulus in order to correct my first conceptions of its import, if I found them to be without foundation. It seemed to me, nevertheless, that this manner of explaining the doctrine did not in any way alter the leading principle which inculcates, that the effect of contra-stimulants is diametrically opposed to that of stimulants ; and that thus, by the application of the first, we cure diseases produced by the second, and *vice versa* : at any rate, this I conceived to be the essential character of the doctrine, from a perusal of the treatise on the epidemic of Geneva. (See my *Memoir* inserted in the Journal of the Medico-Chirurgical Society of Parma, Vol. 3. pp. 205—227 and 284—325.) The memoirs published since that time by Rasori himself, *on the action of digitalis on the living system ; on the employment of gamboge in intestinal inflammations, &c. ; and on the treatment of peripneumonic inflammations with tartarised antimony*, confirmed me in the opinion I had already entertained, of not having badly comprehended the spirit of the doctrine, and to have been, as well as its other partisans, in accordance with the views of the author in its application to practice.

(9.) See *Researches on the American Fever*, § 91 and 92.

(10.) See work cited, § 61 and note 28.

(11.) Although the illustrious Professor Scavini, of Turin, has adopted many of my maxims inculcated in my lectures on physiology and pathology, and in my work on yellow fever, nevertheless, he is not entirely persuaded of the truth of the principle I have laid down, that inflammation, considered in itself and the fibres which it attacks, before it has produced consecutive disorganizations, is always a sthenic action, or, in modern language, a process of *stimulus*. He declares his doubts in his excellent *Essay* on inflammation, with his accustomed ingenuity, and manifests at the same time his desire of seeing them dissipated in the memoir which I have promised on this subject. This work on inflammation, which different circumstances have hindered me from finishing and publishing, I have lately completed, and have communicated its contents to my pupils, in my different lectures on practical medicine. If I can judge of the validity of the arguments which I have employed, to show that inflammation is always in its nature a process of stimulus, from the impression they have made on a great number of pupils, and even on the minds of many expert and learned physicians who attended these lectures, I can flatter myself that they will convince the Professor Scavini himself. This dissertation will be published in a short time, and I wait the judgment of my learned correspondent and others, who, like him, are sincerely attached to the progress of our art, on its merits and character. I shall always be ready to abandon my opinion, or to modify it, when I find it invalidated, or defective in any part.

In the meantime, I think proper to remark in this place, that those who admit an asthenic inflammation, that is to say, an inflammation derived from atony of the fibres and vessels, very probably confound with the phlogistic process or the

inflammatory action, certain morbid conditions which can precede, or occasion an engorgement from distention of the fibres, and which produce consecutively the first excitements of the inflammatory process. It is necessary to remark also, that the facility with which inflammation, under certain circumstances, and in certain individuals, passes into gangrene, is confounded by some with the first and very rapid progress of the inflammation itself, but that we cannot draw from this circumstance any proof in favour of the existence of asthenic inflammation. And, indeed, is it necessary to regard as asthenic the inflammation of the extremities caused by the cold of Russia, because it is occasioned by cold, or because it passes rapidly into gangrene? Is not this inflammation removed by the application of cold water and by snow, if they be applied in the short space of time that the inflammation is still susceptible of being treated and arrested? Finally, it is proper to observe, that some have cited, without just foundation in support of this pretended asthenic inflammation, certain cases and certain surgical operations by means of which we endeavour to augment the inflammation, or to develop it in parts adjoining a part affected with chronic inflammation, in order to destroy by an accelerated absorption, or by a suppuration opportunely excited, this diseased part, so completely altered by the chronic inflammation, that the ordinary contra-stimulant means have not the power of producing a resolution of the disease. By means of such operations which are performed on parts of little vital energy, we do not really treat the inflammation with stimulants, but we increase as it were the disease, in order to destroy, at the same time, the disease itself, and the fibres which it had so completely altered. It is especially for surgery to correct our pathological ideas on the nature of inflammation. It is to two distinguished surgeons, my colleagues and friends, Dr. Stephen Mistrali, professor of

Surgery in the University of Parma, and Louis Ambri, professor of the Surgical Institutions in the same University, that I am indebted for the knowledge of many very valuable facts, which concur to prove, that inflammation invariably consists in a process of stimulus : and it is particularly to the first that I am obligated for some important views on the necessity there sometimes is, as I have before shown, of augmenting the disease in order to destroy the disease itself. I have dwelt particularly on this point in my Lectures on Inflammation.

(12.) In demonstrating, in my Researches on Inflammation, that most diseases arise from an inflammation acute or chronic, apparent or hidden, I have also dwelt on the phlegmasiæ, and on the opinion I had inculcated in my Researches on the American Fever, (§ 50 to 58,) viz. that the pyrexia in these diseases is derived from a phlogistic process, and is kept up by it. I do not deny, nevertheless, that it is impossible that the first febrile movement, caused by an increase of excitement or stimulus, may in some cases precede the partial inflammation : but this first movement (as I have shown more fully in my lectures on diathesis) is very far from constituting a diathesis, and exhibiting its characters. If the diathetic process be not formed in some part, we can soon succeed in arresting and extinguishing this first febrile movement, by properly diminishing the stimulants, or by applying contra-stimulants ; but if, in spite of the sudden diminution of stimulants, this febrile movement is yet maintained, augments and runs through its regular periods, it is because a phlogistic process is already formed, either in a membrane, a viscus, or more profoundly still, in some portion of the sanguineous system. These considerations, which I have developed in the work above cited, will suffice, I hope, to dissipate the doubts of Dr. Quaglia, of Alexandria, with regard to my opinion on the phlegmasiæ, which he communicated by letter some years since.

(13.) In my *Researches on the American Fever*, (page 459,) I declared my suspicion, that many obstinate convulsive affections were caused by a hidden and deep-seated, though limited, inflammation of the nervous filaments, cerebral membranes, coats of the nerves, &c. Ulterior observations, and the fatal issue of some cases, have since confirmed me in this opinion. The autopsic examination of some victims of obstinate hysteria, (which had been treated without benefit and perhaps with injury, for many years, with every kind of stimulant and anodyne (*calmant*) remedy in order to overcome the convulsions,) the examination of these bodies, I say, demonstrated to me⁹ that these diseases often depend on some obscure deep-seated inflammation of more or less extent, which draws, compresses, and in some way irritates the nerves which are endowed with important sympathetic connexions: for instance, certain cases of *tic douloureux*, nervous sciatica, as well as other forms of neuralgia, some obstinate cases of lumbago, convulsive affections of the extremities which are finally allowed to depend on some degree of *spinitis*, &c. What other origin can all these affections, and others analogous to them, have, if they do not arise from a slow phlogistic process, either of the nervous envelops, or of some part which exerts a distension or compression on important nervous filaments?

As it respects acute nervous affections, and especially those fevers which have been considered as asthenic, because the nervous system is seriously affected in them (note 26 of my *Researches on the Yellow Fever of America*), and which were believed to be always properly treated by the stimulant method, who can deny, after the facts set forth by Dr. Rasori in his history of the epidemic of Geneva, that there is almost always developed in such cases, in *typhus*, nervous, and petechial fevers, in consequence of the primitive action of the unknown contagious principle, a diathesis of stimulus, a

phlogistic process curable by proper contra-stimulant treatment? Who has as yet answered to the arguments and facts I brought forward twelve years ago, (see the Researches cited § 49, 59, 73, 76, 97, 112) which tend to prove that yellow fever and its kindred affections arise from inflammation, that they can be treated with success only in the first moments of the disease, and then only by anti-phlogistic means? More recent observations on this disease, obtained from foreign medical journals, confirm me still more in what I have advanced, and show that the anti-phlogistic treatment is now almost universally adopted by practitioners in this fever. I cannot avoid mentioning a fact which was communicated to me at Parma in 1811, by Mr. Pellene, formerly an auditor of the Council of State of France. His father, a spare man, of delicate complexion, was attacked with yellow fever while residing in one of the Bahama Islands. The disease was of the most frightful character, and the case thought to be desperate; but the patient escaped after having been bled twenty-two times, besides taking several powerful purgatives and submitting to a strictly anti-phlogistic regimen.

In my practical considerations on typhus, I have pointed out to my pupils the application of the facts inculcated relative to the American fever to the etiology and treatment of these fevers, either as they arise from contagion or any other external cause. I have also detailed the powerful motives which led me to believe that the morbid process of these fevers is ordinarily only an inflammation, of greater or less extent, of the cerebral membranes, the coats or filaments of the nerves; and, finally, I have shown, that without excluding the possibility of acute nervous affections of an opposite diathesis, we must regard the greatest number of these diseases as of the phlogistic diathesis. Indeed, the prostration of the muscular powers and of the pulse, which we often observe in these fevers, and which was the principal reason for regarding them

as asthenic, do no more prove that such is their diathesis, than the feebleness of the pulse in certain extremely violent cases of pneumonia, and the faintings in carditis, prove the asthenic character of these inflammations. On the other hand, if we consult pathological dissections, and properly appreciate the facts which each of us, doubtless, have observed, we shall find that of a hundred fatal cases of typhus or nervous fever, ninety, at least, exhibit manifest traces of inflammation in the brain. If, in our autopsic examinations, we did not limit our examinations to the larger viscera, and if we could, with equal facility, follow the minute ramifications of the nerves, and especially of those which are distributed to the vital organs, we should probably find traces of nervous phlogosis, even in cases of typhus in which the brain did not present any extraordinary appearance.

Besides, if we admit that the first and unknown action of the contagious principle be irritating, we must also admit that when irritating actions have a certain degree of force there soon succeeds to them a phlogistic process in the parts to which the irritating matter is immediately applied, or on which it particularly acts: and we know that this process, whatever may be the organ or system in which it is developed, whatever may be its particular form, or whatever may be the extent to which it is propagated, always constitutes a state of morbid stimulus, which, considered in relation to the effects it produces and the remedies that overcome it, is similar to other inflammations produced by ordinary agents. The first effect of a thorn piercing the finger is to irritate, but an inflammation of the finger and arm soon succeeds to this irritation, which is only removed by blood-letting and antiphlogistic fomentations. The venereal virus is perhaps an irritative agent, but to the primitive irritation of the urethra there sometimes succeeds a most violent inflammation of this part, of the bladder and testicles, so violent indeed, that,

if it had been caused by heat, it would have required many blood-lettings to overcome ; and which, if it be not soon arrested in its progress, produces the same results as when produced by other causes. The myasmata of small pox, chicken pox, and scarlatina, are perhaps irritants ; but the small-pox is an inflammatory disease which frequently calls for the most active antiphlogistic treatment, the chicken-pox is also an inflammatory disease, and scarlatina an evident inflammation of the skin resembling erysipelas produced by the heat of the sun. Analogy and induction conduct us then, and even oblige us to regard the effects and consequences of the contagious principle as inflammatory. In some cases, and in some individuals not very susceptible of inflammatory action, the effects of the contagious principle will not extend beyond the limits of an irritative affection ; but, if the individual be much disposed to inflammatory action or to the diathesis of stimulus, it appears that the first effects which succeed to the irritation, consist in an inflammation, probably of the membranes which cover the brain and nerves, on which parts the contagion seems especially to act. These inflammatory affections of the coverings of the nervous system produce different symptoms, and present different appearances according as different parts of this system are attacked : so that when the affection predominates in the meningeal coverings, phrenzy is the consequence ; and when the nervous ramifications which go to the voluntary muscles, or those which are distributed on the vital organs are chiefly affected, the case exhibits great prostration of the muscular powers, or the most alarming feebleness of the circulation. This etiology of nervous contagious fevers, appears to me to be so simple and conformable to facts, that I cannot comprehend how any one could have been led to different conclusions. To consider the inflammatory affection, often serious, which frequently occurs in the course of these fevers, as a mere ac-

cidental complication depending on pre-existing diathesis, would necessarily lead to the following dilemma : Either the irritating contagious principle has the power of producing these complications, or it does not exert any influence in their development. If it has the power of producing them, and of carrying them to the degree of the pre-existing inflammatory diathesis, which, without the action of the contagion, would not have incommoded the patient ; then, I ask, is not this to agree with me, that the inflammatory process succeeds to the irritative action of the contagion ? The inflammatory action is greater in some cases, and less in others, according to the predisposition of the individual affected, and this difference is also observed in the action of ordinary stimulant agents. If the contagious principle, on the contrary, has no influence in the production of these inflammatory actions, we must conclude, that, in all the fatal cases of typhus which exhibit traces of inflammation of the brain, or its coverings, (and these constitute the greater part of them), in every person affected with gonorrhœa, who has an inflammation of the urethra, bladder and testicles, which requires to be treated by blood-letting, there is developed, even without the action of the contagion, in the first instances a cerebral inflammation already existing, and in the others an inflammation of the urethra, bladder and testicles also pre-existing. Every one must be convinced that such a supposition would be absurd.

I have already shown, that if we analyse the methods of treatment pursued in these fevers by the eminent practitioners of every age, we shall find them to be, in general, anti-phlogistic, and if we except some contradictions, which the age in which they were current in a manner excuse, contra-stimulant remedies will be found to have been always much employed. Whilst occupied on this subject, I cannot avoid calling to mind the immense number of petechial

fevers, which I have seen treated with success, when I attended the practice of the hospital of Parma, by the prescribing physicians of that period, Drs. Dentoni and Alfieri, with emetics, cream of tartar, tamarinds, tartarised whey, and abundant antiphlogistic drinks. I shall always remember, among a great number of other cases, that of Peter Boni, who being on the point of perishing with petechial fever, and covered with cold sweats, recovered, contrary to all expectation, on losing more than a pint of blood from the nose. I shall always remember, in like manner, the case of James Cassani, still living and a friend of my family. He was also on the point of dissolution, when, on the suggestion of my learned friend, Dr. Santarelli, of Macerata, who practised medicine at that period, Dr. Alfieri opened the temporal artery of the patient, and, while the blood was yet flowing, he recovered his natural colour, strength, and feeling.

I shall pass over the multitude of cases, which I could produce from my own practice, of nervous fevers successfully treated by the contra-stimulant method. at a time even when Brown's doctrine was in vogue; for, from an aversion I always had to volatile remedies, I preferred to employ, believing them to be stimulants, antimonial wine, Kermes mineral and valerian; and, at the same time, I made free use of acidulated drinks, having observed them to produce the best effects in the hands of my first preceptors. Neither shall I speak of the recoveries, still more numerous, from these fevers, which I obtained from an exclusive anti-phlogistic method, since the year 1801, the period when the illustrious Rasori published his history of the epidemic of Geneva, to whom I am indebted for my first radical change of some important maxims. Nor shall I recall the numerous cases where the recovery took place, as it were, under fortuitous circumstances, but with which I had reason to be satisfied: for recovery from dangerous nervous fevers does

not always depend solely on the use of proper remedies, but frequently on the occurrence of many favorable circumstances, and especially on employing the remedies before the diathetic process, which is often extremely rapid in its progress, may have produced incurable alterations. I believe, however, it will be useful to relate, in this place, two examples of nervous fevers cured by blood-letting and other antiphlogistics, although in them the muscular prostration and the convulsions were so alarming as to inspire the boldest with terror, and seemed to demand an entirely opposite method of treatment. Count Giberto Arrivabene, of Mantua, was the subject of the first case. I was consulted in an advanced state of his disease, and found him pale, delirious, agitated with subsultus tendinum, pulse extremely small, convulsions of the muscles of the face, pupils dilated, &c.—Bleeding and the internal use of iced drinks drew him from this frightful state, and restored him to health. The second case occurred in my learned friend, Count Sanvitale, pre-vost, whom I visited at his residence in the Priory, where I found him affected with a very aggravated form of nervous fever, which had reduced him to the last extremity. He was delirious, had subsultus tendinum, difficult and sterterous respiration, &c.; and yet he was cured by repeated blood-lettings, a free use of antimonial preparations, in short, by the contra-stimulant method.

But it is not necessary to go back to distant periods to show the utility of the antiphlogistic treatment in most cases of nervous and petechial fevers. My illustrious and lamented friend, Professor Raggi, assured me three years ago, that he obtained very great success in the greater number of petechial fevers, from the antiphlogistic treatment. His pupils remember the frequent occurrence of the appellation *peticula hypersthenica* in the clinical tables formed under his direction; and this profound practitioner was incapable of

employing a curative method which did not answer to the diagnostic he had formed of the disease. The antiphlogistic treatment is also employed by the greater part of the physicians of Parma, in the extensive petechial epidemic with which this country is afflicted the present year; and it is by this treatment that they have obtained the greatest number of recoveries. The treatment had recourse to, it is true, is very mild, because as yet the disease has been generally slight. It consists in employing antimonials, cupping or leeching, abundant aqueous drinks with nitre, tamarinds, cream of tartar and remedies of that character. But if this epidemic was asthenic or of the diathesis opposed to that of stimulus, the treatment although mild ought to be stimulating; and under the antiphlogistic treatment the disease should verge toward a fatal termination, or, at any rate, be cured with difficulty. In short, the utility of a moderate antiphlogistic treatment proves conclusively that in more aggravated forms of the fever it would be necessary to act with more energy, but still in the same direction. At Modena, where the same disease has prevailed for a long time, it was also the antiphlogistic method, as I am informed, which was employed with success in the greatest number of cases by Professor Ruffini, and two other distinguished physicians, Professor Pisa, and Dr. Padova, who treated a great number of cases. At Reggio, my friend, Dr. Manzotti, saved by the same treatment many patients who were very severely affected. Dr. Marconi, of St. Hilary, and Dr. Umilta, of Montecchio, employed with firmness the same treatment in the territory of Reggio, and they have obtained, and do still obtain, from it the best success. Other friends, Dr. Louis Navaroli and Joseph Ferrari have also employed many years ago with good success this same method in a similar petechial epidemic which prevailed in the territory of Mantua. Finally, it was by this same method that my for-

mer colleague, Dr. Gasapina, and Dr. Palazzini, obtained the most happy results in similar cases, and it was to the kind attentions of the latter, and to the bold antiphlogistic treatment which he employed, that the former was indebted for his recovery.

I daily acquire convincing proofs of the utility of the contra-stimulant method of treatment in nervous fevers, in visiting our Clinical Institution, the Civil Hospital, and the Abbey, in which petechial fevers are received. My pupils saw last year the propriety of this method in the small number of nervous fevers, in which the remedies were timely employed; and in some patients, who entered the hospital at so advanced a period of their disease that they died soon after, when, on examining their bodies, the meningeal coverings were found inflamed, adherent and thickened, the cerebral vessels engorged with blood, extravasation into the cavity of the cranium, &c. This year, care has been taken not to receive the sick of these fevers at so advanced a period of their disease, and the cases which correspond to the progressive numerals, 6, 8, 32, 33, 44, 48, 49, 60, 66, some of which were of an aggravated character, were treated on the contra-stimulant plan, even by blood-letting, according to circumstances, with the best success: these cases have demonstrated to the pupils, that, in the greatest number of instances, the nervous fever is connected with an inflammatory process, and that the contra-stimulant treatment, timely employed, is alone capable of averting its consequences. In the case of Mr. Conti, a practitioner of this school, (progressive numeral 54), the disease had arrived at that point from which the patient rarely recovers. He exhibited the paleness of death with the eyes faded, the forehead bathed in a viscid perspiration, the respiration difficult, and the pulse uncertain, intermitting, and extremely small; and yet he was snatched from this extreme peril by copious

bleeding from the temples by means of leeches. I was compelled to this procedure, from the advantage I had already received from blood-letting in allaying the violent pain of the head, which greatly afflicted him. The patient did not merely recover, his pulse, his colour, and his feeling, but also, the diathesis, which was not entirely overcome, produced another febrile movement and violent pulmonary symptoms, which required three additional bleedings to subdue. This recovery proved to my pupils that in nervous fevers, the inflammatory process is not only an important part of the disease, but also that it is sometimes extremely obstinate. Moreover, the skilful Dr. Comelli, assistant at the Clinical Institution, and ordinary physician of the Civil Hospital, who pursues the same method of treatment in nervous and petechial fevers, confirms me every day still more in the correctness of my pathological views of these terrible diseases, by the very great success he obtains in the great number of cases which he treats in these institutions.

I do not deny, that in many nervous fevers, to use an expression of the illustrious Rasori, there may be little diathesis. I know that the development of an inflammation, more or less intense, of a phlogistic process, more or less deep-seated and extensive, produced by the irritation of the unknown principle of contagion, depends on circumstances and individual susceptibility. It depends upon this same susceptibility that a coup de soleil produces, in some instances, only a slight cephalalgia, and in others a violent phrenitis.—(See *Researches on the Fever of America*, §§ 138—144, and notes 120 and 127.) I allow also, that an irritating, contagious principle introduced into the economy, cannot be subdued by ordinary means, and that it will not cease to disturb the regular functions of the system, only after having lost its energy by the use of proper means, and after a given time, or else, on being expelled from the system. Although

this principle cannot be subdued by the ordinary means of our art; although it will continue to act and to irritate for a determinate period, which we cannot abridge, yet we can nevertheless overcome the phlogistic process, which the irritation has excited in subjects disposed to inflammation, in the same way as we overcome by a proper anti-phlogistic treatment, (such a treatment as is recommended by the great Sydenham, and ordinarily employed by practitioners without excluding blood-letting,) the violent inflammation of the skin and viscera, which is developed in many individuals by the contagion of the small-pox. (See Researches on Yellow Fever, § 146.) In many cases where, from little or no susceptibility in the individual to inflammatory action, the disease is limited to an irritative disorder, it will doubtless be sufficient to dilute the irritating matter by copious drinks, and to watch the patient as long as the irritation continues; but every diathetic process, either severe or slight, which can succeed to irritation will be of the phlogistic character, for the reasons we have already given: and if the *nervous asthenica*, or the diathesis from defect of stimulus does sometimes exist, which I do not deny, I do not believe that it is ever produced by contagion.* It is only necessary to read the

* The author still admitted in 1805, the existence of asthenic typhus, but he afterwards changed his opinion. What he says here, might lead one to believe that he still admitted the existence of a nervous asthenic fever; but I believe, he merely means by the expression *nervous asthenica*, what is understood by the *low nervous fever* of Huxham. The group of symptoms to which this appellation is applied, is most frequently, according to Tommasini, a nervous fever of excess of stimulus, with marked adynamic symptoms. He believes, nevertheless, that there has been confounded under the same denomination, a disease of quite an opposite nature, consisting in a marked state of contra-stimulus, which presents the same appearances, but which cannot be called *fever*, since throughout its course it never presents any of the characters of fever; it is this last disease that he regards as exhibiting the *nervous asthenica*. In other works he has explained himself more clearly; in his second letter On Typhus, published in

observations of the ancients on the fevers formerly denominated petechial, nervous, malignant, &c. ; and especially the works of Trallien, Peter de Castro; Settala, Sydenham, and Dehaen ; to examine the observations and writings which treat of the plague of the Levant, the yellow fever, (believing it to be contagious) and the epidemics of the contagious fevers which have prevailed, at different periods, in Tuscany, Liguria, Lombardy, &c. ; and, finally, to consult the results which have been obtained from autopsic examinations, to be thoroughly convinced of the phlogistic nature of the process which is developed in these fevers.

These considerations, on which I have dwelt perhaps too long already, on account of the epidemic prevailing at this time, conclusively demonstrate that the greater part of acute nervous fevers, are based on a phlogistic process. If we add to them, a great number of *chronic nervous affections* proceeding from this same phlogistic process, although it may be circumscribed in its extent ; also many apoplexies, epilepsies, and cases of tetanus from the same cause, it clearly follows that inflammation produces and maintains that assemblage of nervous phenomena, both acute and chronic, which have been attributed, up to the present time, to quite different and even opposite causes. What shall we say then of gastric and bilious fevers, which, scarcely extending beyond the limits of irritative affections, clearly show that they are main-

1818, he has declared that nervous fevers are always phlogistic : and in his *Considerations on Inflammation*, published in 1820, we have the following remarks on this subject at page 201 : " In the last writings which I have published, and in my lectures on fever, I have corrected the opinion which I maintained fifteen years ago, that continued fevers could in some cases be asthenic. Facts have compelled me to base on some phlogistic condition, the etiology of continued fevers, and consequently, the nervous ; without excluding, at the same time, the idea that in some cases the fever may be maintained by irritation, which is a condition very different from defect of stimulus, and which is removed by remedies altogether different from stimulants."

tained by a gastro-hepatic inflammation? (See Researches on the Yellow Fever, § 89—95.) What shall we say of phthisis, scrophula, chronic obstructions, and many cases of phrysconia, which are all undoubtedly insidious and chronic inflammations? What shall we say of the very numerous family of cutaneous affections, which are so many chronic inflammations of the skin of different types? And, finally, what shall we say of the exanthematic diseases, such as small-pox, scarlatina, measles, &c. in which it is certain, that in consequence of the action of the contagious principle, (at first irritating perhaps) there is developed a cutaneous inflammation of a particular type? This subject would carry me too far, if I attempted to treat on inflammations of the sanguineous vessels, which are more frequently than is commonly supposed, the hidden source of many diseases that have been attributed to a very different origin. In my treatise on *Arteritis*, I have shown at large, not only that many fevers which are believed to be primitive, have their diathetic origin and seat in an inflammation of the sanguineous vessels; (see also Researches on Yellow Fever, § 50 to 52 and the corresponding notes); not only that the most of aneurisms proceed from an inflammatory process which is often confined to a small part of an artery, whose coats are thickened and altered in their texture; not only that chlorosis is often an inflammation of the internal coat of the arteries; but also, that most of the symptoms, which are referred to hypochondriasis, many flatulencies accompanied with a chlorotic habit, and arterial pulsations, especially of the descending aorta, which are generally regarded as nervous affections, arising from an asthenic state of the intestinal canal, and which accordingly are improperly treated with ether and liqueurs; I have shown, I say, that all these affections yield with marked success, to the use of iron, bitters, and squills, and that they are so many cases of *arteritis*. In short, in re-

viewing all I have said on this subject, it appears to me that I have declared, on the present occasion, not without reason, that the greater part of diseases which afflict humanity presents a phlogistic condition : and not to have said, without foundation, in another place, that the catalogue of serious diseases and deaths are almost all marked with the seal of inflammation. (*Ameruan fever*, note 33.)

The celebrated Professor Marcus, in his *New Observations on Encephalitis*, declares that typhus is certainly nothing more than an inflammation of the brain, and that the only means of arresting its progress consists in having recourse to blood-letting. Reuss, in speaking of petechial fevers, in his treatise *On the Nature of the Exanthemata*, maintains that there is a sort of struggle between the *external power* (the contagion), and the internal vital energy of the system, and that each of these powers strive to preserve their *individuality*. This struggle plainly expresses a state of inflammation, which, indeed, the author declares is always developed in these fevers. Consequently, he recommends the application of cold, in order to repress the vital activity of the system ; but why he should endeavour to repress the vital activity, I do not comprehend, as according to him, the stronger this reaction is, the more certain it will be of overcoming the disease. However this may be, the author, in language truly strange, inculcates the phlogistic character of these fevers. The celebrated Hufeland in his work on *The Plague of Armies*, of the present and former times, and on the use of blood-letting in this disease, proves the ancient employment of this remedy in these cases. Although he establishes some exceptions to its too general employment, he nevertheless extols the advantages of cold applications to the head, of emetics, acids, tamarinds, scarifying the head, and, in short, of the anti-phlogistic method. He especially recommends its adoption in the *first* stage of petechial fevers ; a period

in which the event of the malady is perhaps decided in all inflammatory diseases, and when the efforts of our art can be employed with most success. Finally, the celebrated Hildebrand, after a minute description of typhus, and perhaps its too systematic division into eight periods ; after much investigation on the nature and properties of its contagious matter, and on the manner of its producing the disease, concludes by declaring that the proximate cause of this disease consists in an inflammatory condition of all the nervous membranes ; a condition which is propagated to the nerves and sensorium. His directions for its treatment are not perhaps sufficiently concise for the young student ; and although he is not as favourable to blood-letting as other German physicians, yet he admits, that it is a necessary remedy when the disease is marked by high inflammatory symptoms, which probably means, that aggravated typhus calls for active treatment. He praises also other remedies which are certainly anti-phlogistic.—He proscribes tonics, and excitants, during the inflammatory period ; and afterwards, during the period which he calls nervous, (as if the nerves were not affected from the beginning,) he recommends remedies which he calls volatile excitants, but which, for the most part, are fortunately contra-stimulants : thus under a different language, and in an indirect way, he is finally found to coincide with the maxims professed by the most eminent physicians of Italy. Nevertheless, none of these foreign physicians were aware, that in Italy, since 1800, more than one author had inculcated and proved by facts, the phlogistic nature of these fevers ; and it is certainly very singular that Hildebrand, in 1810, should have been ignorant of the fact, when he assures us in his preface, that he has been continually investigating the nature of these fevers for twenty years.

(14.) I do not absolutely deny the possibility of that morbid condition which Brown calls *indirect debility*, but which I

would rather designate by the appellation *relatively direct* or *absolute debility* (*faiblesse relativement directe ou absolue*): (See Researches on the Yellow Fever, note 13); for it consists in a diminution of excitement, because ordinary stimulants are insufficient to maintain it. I do not deny that there exists instances of drunkards, so habituated to the strong stimulus of wine and spirituous liquors, that they become affected with tremors, and are incapable of attending to their ordinary occupations on discontinuing their potations, and only recover the vigour of their members by returning to them. Such cases recall to mind the brilliant expression of Gaubius: "*Hesternam crapulam nova pocula solvunt.*" I believe, nevertheless, that this state, when no inflammation is developed, consists merely in a condition of habit—a necessity for strong stimulants, proceeding from the fibres becoming incapable of feeling the impression of moderate ones. I believe also, that we can, in these cases, maintain the excitement to the proper degree of health, by the application of stimulants proportioned to this necessity; so that we may, perhaps, re-establish the vital powers in their natural condition, by diminishing very gradually, the daily use of stimulants, and by substituting for them, little by little, nourishments calculated to repair the injury which the fibres have sustained. I believe also, that it is essential to distinguish the state of which we are speaking, from that state of intoxication which is, on the contrary, the effect of immoderate stimulus, and is curable by cold and contra-stimulant remedies. It happens very rarely, in my opinion at least, that the condition which consists in a habitual necessity of stimulants, succeeds to an abuse of stimulants; for this abuse readily developes some phlogistic process, either acute or chronic, which soon destroys the laws of habit, and then the fibre can no longer support stimulants, either strong or even moderate; in short, it then becomes a diathesis of stimulus, and is curable only by

means of contra-stimulant remedies. This is what we observe indeed in hard drinkers, who, as soon as a gastritis or hepatitis is induced by their potations, can no longer bear even wine. Their disease consists in a slow phlogistic diathesis, which if curable at all, is only so by remedies calculated to overcome this slow inflammation. (See Researches on Yellow Fever, notes 30 and 35.) It is especially worthy of remark, that in almost all the diseases which the Brunonians attribute to *indirect debility*, there is, on the contrary, chronic inflammation already established, which is curable only by the contra-stimulating method. We have already had occasion to show this truth from facts, in many cases of disease admitted into the Clinical Establishment, where the causes and characters of the *indirect debility* of Brown were united, and yet the diseases were cured by contra-stimulants.*

(15.) The diathesis should not be characterised from the

* Broussais in his *Examen* of 1821, on Brown's doctrine of indirect debility, has professed principles analogous to those which Tommasini has taught in his *Treatise on Yellow Fever* and in this work.

"If it be certain," says he, "that many hard drinkers become accustomed to spirituous liquors to that degree that they can take, without producing intoxication, quantities of them which would some years before have endangered their health, it is not less certain, that many persons do not acquire this privilege, and can never go into these excesses beyond certain limits. Brown, then, was wrong in applying this proposition to all without exception. But why did he not add that all drunkards, after a certain time, become intoxicated with very small quantities, especially such as had been extravagant in their excesses, and that too, a long time before the change can be attributed to the feebleness of age. It is clear, that in such cases the excitability has not been exhausted but rather accumulated, which overthrows one of the principal pillars of Brown's system." *Examen*, 1821, Vol. 1. pp. 63, 64. At page 65, he declares, "that a person wasted by the immoderate use of wine, and become hydropic, is enfeebled by a latent inflammation, most generally of the stomach, sometimes of all the abdominal viscera, and not by the general exhaustion of his excitability.

symptoms of the disease or the physiological* debility of the patient, but from the nature of the remedies which are found to be beneficial in it. Instead of employing the denominations *sthenic diathesis or diathesis of stimulus*, and on the other hand, *asthenic diathesis or diathesis of contra-stimulus*; call the first, *a morbid state curable by contra-stimulants*, and the second, *a morbid state curable by stimulants*, and you will see how true it is in practice, that the greater part of diseases are curable by the contra-stimulant method. Who would say, in considering the physiological debility and appearances, that certain persons of extreme frailness of habit, are capable of bearing the repeated loss of blood, and the operation of purgatives and emetics; and that they can, by these means alone, be saved from the disorganizations with which they are threatened? I could relate a hundred examples of this kind, which have occurred in the long course of my practice in Parma; but I shall content myself with recalling those which I have recorded in the eighth volume of the Medico-Chirurgical Journal of Parma, p. 257, note 1.—As it regards the frailness of habit and the extreme feebleness of the individual, I shall never forget the case of a lady of Parma (Mrs. Cécile Tonani). She was affected with phthisis pulmonalis, attended with a very copious expectoration of purulent matter, profuse sweats, extreme emaciation and a cadaverous appearance of visage; yet, by means of blood-letting, the febrile symptoms and morbid excitement, which threatened her enfeebled life, were many times allayed, and

* Tommasini means by *physiological debility*, that debility which results from the imperfection and feebleness of the functions; it may depend either on excess or deficiency of vital action. In a phlegmasia, where there is certainly excess of vital action, the sick are nevertheless physiologically feeble in the muscular organs, &c.

The professor calls *pathological debility*, that which consists always and essentially in a diminution of the vital action. He makes the same distinction with regard to the state of strength.

it was with astonishment that my colleague, Professor Louis Ambri, and myself, saw her life prolonged by means of the antiphlogistic method.

I was equally surprised with the advantages I obtained from this method, in the case of an old servant woman in the family of Buralli of Parma. This woman constantly experienced a sense of languor, her pulse was extremely feeble, she was greatly emaciated, and besides, of a very advanced age ; so that I determined in the first instance, to employ excitants, for the removal of the vertigo, tremours and faintings, with which she was continually threatened. The ill success of this method, induced me to have recourse to remedies of an opposite character, and the blood-lettings, which seemed to be contra-indicated by the age and aspect of the patient, dissipated the morbid symptoms, and gave the woman a vigour and health she did not before enjoy. Who would have believed, in considering only the symptoms of vital prostration, that the asphyxia, described by the celebrated Currie, could be cured by contra-stimulants, and that we can cure by cold, those cases which are produced by cold ? Who would have believed, that blood-letting and contra-stimulants, would produce such decided advantages in the clinical cases, which correspond to the progressive numerals 18, 22, 28, and 40, of the last year, and 42, 59, 84, of the present ? Who would not be tempted, from the character of the symptoms in a case of enteritis, where the pulse is small, feeble, and irregular, the forehead covered with cold sweat, the eyes sunken, and the countenance cadaverous, to believe the disease to be asthenic, and to treat it with opium and ether ? and yet, if there be any means of cure, they consist solely and entirely in copious blood-lettings. Finally, if we consider only the forms of disease, and especially of those diseases that are generally placed in the asthenic class, who would ever suspect that among the numerous cases of cholera, (a disease

which is almost always curable by opium and ether,) some of them depend on a diathesis of stimulus, and are curable by blood-letting and the antiphlogistic method? Yet, a case of cholera, in which I was consulted some time ago by Dr. Comelli, assistant physician of the Clinical Hospital, and ordinary physician of the Civil Hospital, was happily removed by venesection and the antiphlogistic method, which this physician employed, and which I myself afterwards approved. Tetanus is generally regarded as a nervous and spasmodic disease, which requires the use of opium and stimulating frictions; yet, a young girl, affected with the disease partially, was received into the Clinical Hospital the last year, and cured by antiphlogistics. The cases of this disease related by Ramel, Ackermann, Schaet, and Trnka, cured by mercury and blood-letting, prove that even this terrible disease depends on the diathesis of stimulus. A case better calculated to show this truth cannot be produced, than that of Mr. Bonetti, to whom I was called at Mantua, in October, 1814. He was attacked with a most violent tetanus, from which he recovered after a tedious illness, by the use of blood-letting and the employment of drastic and antiphlogistic remedies. As it respects certain chronic affections, which are currently believed to be uniformly asthenic, as incomplete paralysis of the inferior extremities, chronic rheumatism, lumbago, and sciatica—these diseases afford many examples which prove the fallacy of such a doctrine. I saw the last year with Dr. Venturoli, an assistant of Clinical Surgery, and ordinary surgeon of the Hospital of Vita, a female afflicted with a semi-paralysis of the left thigh, without inflammatory tumefaction. This woman, although of feeble constitution, was perfectly cured by the application of leeches to the labia pudendi, and by purgatives. The chronic rheumatic affection, number 10, gradually abated, and the patient slowly regained a better state of health, from the use of drastics

and purgatives. Not having derived any advantage from the use of purgatives in the case of chronic sciatica, number 51. I took into consideration the frail habit of the patient, the absence of fever, of irritation of pulse and morbid heat, and treated the case with opium, yet the disease continued unabated, and I thought it advisable to return to antiphlogistics. Repeated blood-letting, in which the blood exhibited a buffy appearance, cured the patient as by enchantment.

(16.) In one of my lectures on diathesis, I have shown from well known facts, that in many cases, there is undoubtedly developed (whatever may be the manner of its production) a diathesis of stimulus or a phlogistic process, in consequence of the action of manifestly debilitant powers, even in the midst of the most evident vital prostration; and that this process can be removed only by the aid of a prompt antiphlogistic method. In order to prove this assertion, it is sufficient to cite, the examples of arteritis produced by terror without the intermediate action of any stimulus, and which nevertheless can only be cured by bleeding; the cases of violent fever which quickly follow the prostration produced by a violent blow or commotion; and the inflammations of the extremities, occasioned in northern latitudes by continued cold without the supervention of heat, which it is necessary to treat with the application of cold, to obtain their removal and prevent their rapid passage into gangrene.

It is truly difficult, (it is thus I expressed myself in the lecture alluded to,) it is perhaps even impossible, to explain, how this increase of excitation and this development of inflammation, can take place in the midst, and in consequence of the vital actions. The pretended operations of the *vis medicatrix naturæ*, so extolled by the ancients, even though they were constantly salutary, (and they certainly are not, where an inflammation, an arteritis, or puerperal fever is developed,) would in no wise account for the vital re-ac-

tion of which we are speaking ; and moreover, in the view of a rigorous philosophy, such an explanation is manifestly a *petitio principii*. The cause of this development of a diathesis of stimulus, in consequence of a defect of stimulus or excitation, will probably always remain hidden. Does this mysterious action ever depend on the concurrent actions of the vital and hydraulic powers operating on the system? for, in our study of the vital powers, we are not entirely to neglect the physical conditions of the economy. Do certain parts, more sensible and more exposed to the action of debilitants or contra-stimulants, suffer more than others from the application of contra-stimulants? The capillary vessels being more exposed than other parts to the prostration produced by contra-stimulus: is the blood thus accumulated in the larger vessels, and does it produce there, by its detention, a stimulus capable of provoking a phlogistic excitement? I see too many objections to this opinion to allow me to entertain it; but it was nevertheless excusable in the great Boerhaave, in the midst of so much obscurity, to have proposed a similar hypothesis; and to have attributed to the obstruction of the small vessels, the repulsion and accumulation of the blood into the larger ones, by which means a consecutive and proportionate re-action of the heart was produced. However this re-action may be produced, it is an incontestable fact, that an excessive excitation, a febrile movement, and inflammation are frequently developed in a state of prostration or contra-stimulus of the system, which is the immediate effect of debilitating powers; as cold or contra-stimulants, poisons, or even by the action of such powers, as produce pain and derangement in parts, as cerebral commotion. It is certain, that the great men of every age, Hippocrates, Galen, Stahl, Van Helmont, Hoffmann, Boerhaave, Baglivi, Gaubius, Cullen, Darwin, Reil, Giannini, Monteggia, and more recently the ingenious Dr. Botto, in his *Memoir on Cerebral Commotion*, have been struck

with this phenomenon, and many of them have endeavoured to furnish the explanation of it : which proves, at least, that the fact has been often and universally verified ; and it is truly astonishing, that Brown alone should not have seen it, and taken it into consideration. Moreover, it is also a fact, that this prostration or state of contra-stimulus, may sometimes be permanent or mortal, without the re-action always necessarily succeeding ; as it is proved in other cases, that a process of stimulus is sometimes developed in consequence of this primitive prostration. Cullen was in error in considering spasm, (which corresponds to the state of contra-stimulus,) as too generally the first and necessary link in the development of fevers and inflammation : but Brown was also in error, in regarding spasm as the characteristic sign of feebleness, (see *Abridgment of the New Doctrine*, § 93.) and in excluding the possibility of a re-action succeeding to it.*

(17.) When facts are incontrovertible, the difficulty or impossibility of explaining them, can never warrant us either in denying or neglecting them. How frequently does it happen, in the course of a fever certainly hypersthenic or of ex-

* As it regards vital re-action, the views of Broussais are almost entirely in accordance with those of Tommasini : for he admits that a cause essentially debilitating, can become a powerful cause of phlegmasia or neurosis. He thinks the phenomenon is to be referred to the laws which preside over the conservation of life. "If cold," he says, "enfeebles or diminishes the incitation of the cutaneous organ, the laws which preside over the conservation of life, produce a sur-incitation in the fibrous tissue of the articulations or muscles, in the mucous, serous or parenchymatous substance of the lungs, gastric organ, &c.

"The exercise of the vital laws, produces results nearly analogous, under the influence of famine pushed to extreme, without the action of debilitating aliment and the depressing passions. It is thus, that the gastric organ, offended by the presence of aliment badly digested, or by the pain inseparable from protracted famine, experiences an incitation which lights up an inflammation in its mucous membrane ; it is in virtue of the same law, that the pain caused by chagrin, accumulates the incitation, the blood and nervous energy in the brain, lungs, heart, or digestive organs." *Examen*, tome I. p. 68

cess of stimulus, in a synocha for example, in a fever which we ought consequently to treat, and do in fact, treat with success by the contra-stimulant method; how frequently, I say, does it happen that the patient, with other symptoms, is seized with spontaneous vomiting? If we examine the state of the patient at this time, we shall find that the vomiting effects what we endeavour to effect by our remedies, it calms the febrile heat and diminishes the erythrim. In many cases, where the diathesis is very slight, the spontaneous vomiting entirely destroys it; but when the diathesis is more severe, this is not the case, and we are obliged to continue the application of active contra-stimulant means in order to overcome it. But it is nevertheless true, that whilst the vomiting continues the degree of stimulus is diminished, and the patient cannot, at that time, support the application of means which he will afterwards be able to bear, and which will even become necessary. In a hemorrhagy of the diathesis of stimulus, the loss of blood itself diminishes the cause which has produced it. No one can deny this. If the diathesis be slight, the hemorrhagy destroys the morbid state, and the symptom becomes the remedy of the disease. If the diathesis be severe, it will be necessary, in spite of the spontaneous loss of blood, to employ blood-letting and administer contra-stimulants; because the morbid stimulus will still continue in the arteries, even though they were deprived of half of the blood which they contain in the state of health. We cannot deny, however, that the loss of blood, although spontaneous and symptomatic, may in itself be an antiphlogistic means, and that it will sometimes throw the animal machine into a condition, though temporarily, of contra-stimulus or prostration, sufficiently alarming to require the momentary suspension of means which we can afterwards employ with advantage. This observation is applicable to the effects produced by pain and intense cold.

When the diathesis is strong and affects the system powerfully, this transitory state of depression will not be sufficient to destroy it, and accordingly after a short time, it will resume its ordinary course. Nevertheless, I believe it cannot be doubted, that at the time the depressing symptoms occur and are in their greatest force, the diathesis is either arrested in its progress, or momentarily diminished in its intensity. These considerations are set forth in my *Memoir on Pain*: it appears to me that they do not in any way, invalidate my fundamental ideas on diathesis.

(18.) My *Memoir on Pain*, which was promised some time ago, has not yet been published, because it contains many ideas, which seem to me to depend on others, which it is necessary previously to unfold in another work.

(19.) A person benumbed by intense cold may be recovered, provided we treat him, in the first instance, by slight stimulants and the application of caloric; by which means we prevent the consequences of this first state of insensibility. But if we do not apply these means with promptitude, there is frequently developed a violent fever—a distressing inflammation, or an arteritis, and then the stimulants and heat, far from being applicable, would, on the contrary, only prove injurious. A young girl violently affected by terror, may, in the first instance, be treated with ether, wine, and spirituous liquors; but if, in consequence of this terror, there is developed, as frequently happens, a re-action of the arteries, an arteritis, or an inflammatory fever, or some other affection of stimulus, then, the wine and ether become injurious, and it is necessary to employ opposite remedies. In like manner, in cases of painful contusions, we may in the first moments, employ with success the application of alcohol to prevent the successive inflammation, but as soon as that time has passed, the alcohol can no longer be supported, and then we, on the contrary, derive advantage from cold ap-

plications and contra-stimulants. We can explain in this way the contradictions which arise from the use of opposite remedies, equally extolled by empirics, in similar cases. The explanation of these facts, and the good or bad effects of remedies, depend on the different times of their application.

(20.) See *Researches on the American Fever*, § 131.

(21.) The ingenious Doctor Guani appears to have been struck with the importance of the fact, that in diseases of diathesis, the diathetic process continues after the cessation of the causes which produced it; whilst the contrary occurs in diseases of simple irritation or disturbance, where, after the evacuation, for example, of the tenia, which kept up the convulsions, after the passage of the calculus which disturbed the nervous system by its irritation, after the evacuation of a poison or its neutralization, or after the extraction of a thorn which has pierced a sensible part, the disease soon ceases or begins to diminish, or, at any rate, is not susceptible of being any farther aggravated under such circumstances, unless some diathetic process is formed. It seems to me, I say, that this author has felt the importance of this cessation of the irritative symptoms on the cessation of the irritating cause, and that this property shows a marked distinction between the conditions of general disease, and the state of irritation, or what he calls the state of *perversion* of vital action; which differs from excess or deficiency of action: he also adds, that this perversion may continue after the cause has been removed. (See *Report of J. B. Guani to the Central Commission of Health of Genoa, on a contagious fever*. Genoa, 1816, p. 16, 17.) But in fact, when this derangement of the vital actions is not maintained, as frequently happens, by the diathetic process which is developed, and compresses or distends some important nervous fibres comprised in the inflamed part (and in this case the *perversion* has no farther connexion with the *perverting cause*, which

has already ceased to act, but depends on a new cause); when this does not happen, I say, this perversion will soon cease, or begin to diminish, or at least will not augment, on the cause ceasing to act, or on its being removed. This *cessation*, in my opinion, always forms a characteristic distinction between the diseases of irritation and those of diathesis, and does not permit us to view the former as presenting that deep-seated, permanent, morbid condition which increases after the subtraction of the cause, but which we observe in the latter; that is, in affections which depend on a diathesis. It remains to be seen, what the explanations are which Doctor Guani has promised to give on this morbid form of vital action which has peculiar characters. If it can be proved that this perversion depends neither on excess nor defect of stimulus, nor on any affection derived from them; that this perversion can subsist, be augmented, and pursue a determinate course like those of diathesis, even after the disturbing cause has been removed; that it cannot be cured either by stimulants or contra-stimulants; and finally, that it yields only to remedies endowed with an action altogether different from the action of stimulants or contra-stimulants, but really capable of correcting this *perverted mode* of action; then there will be no doubt that this perversion constitutes a diathesis different from the two diatheses which are at present acknowledged to exist.

(22.) The impossibility of curing diseases which arise from irritation, by instituting a new action (*par compensation*), and the necessity of really removing or destroying the irritating cause in order to obtain their cure, is, in my opinion, the principal character which distinguishes irritative diseases from those of diathesis; for in these last we can certainly destroy the stimulus or phlogistic excitation by the application of proper contra-stimulant remedies, even without exactly removing the stimulating cause which has produced them.

This idea will be found farther developed in my Lectures on Diathesis.

(23.) That is, a diathesis by diffusion. See the work cited, § 119.

(24.) Giannini—*On the Nature of Fevers*, chap. vi. Vol. I. p. 331 to 341.

(25.) Bondioli—*Memoir on the Irritative Action*, inserted in the *Transactions of the Italian Society*.

(26.) Monteggia—*Chirurgical Institutions*, Vol. III.

(27.) Fanzago—*Essay on the essential differences of general Diseases*.

(28.) Dr. Guani declares, that in order to cure what he calls perversion of vital action, an affection which differs from excess or deficiency of action ; it is necessary to employ *stimulants that are adapted, and possess a given degree and quality of excitation*. But if stimulants (see Report already cited, page 17) are capable of correcting this derangement of vital action, this derangement has then the characters which indicate a state of contra-stimulus, whose principal character consists in being corrected by means of stimulant substances, proportioned to the degree of morbid affection. If this perversion (which in the epidemic described by the author, required the use of excitants *adapted* to the case) was really of a peculiar nature, it would have been necessary, in order to cure it, to have employed remedies endowed with an *anti-perverting* action ; remedies which I am unable to designate, unless they may be those which neutralize the cause of irritation : and, indeed, inasmuch as I see this altered or perverted mode of vital action—this disorder—perturbation—irritation of the living system, cured by remedies which have a stimulant or contra-stimulant action, more or less energetic ; by remedies which also cure an affection produced by an excess of wine or of heat, by cold or the depressing passions, viz. diseases of stimulus or

contra-stimulus, I am warranted in believing that the disease cured, appertained to one of the two acknowledged diatheses, and that although it were developed in consequence of the action of irritant substances, it has been kept up by one of the diathetic processes which often succeeds to irritation, and which is cured by the ordinary method. (See note 13.)

(29.) Under how many different aspects do we not observe morbid phenomena arising from the same cause? Or, rather, what diversity of successive effects does not the same cause present? I shall always remember as an example of this kind, the case of a woman in the service of Madame Riboli, of Parma, my client and friend, whom I treated in conjunction with my learned colleague, Professor Colla, whose premature death, shortly after, the country and the university had to deplore. This woman had swallowed by mistake, in place of some purgative salt, an half ounce, and perhaps more, of the sulphate of zinc. The first symptoms were excruciating pains of the stomach, agonizing distress, vomitings, convulsions, &c. all of which are certainly referrible to a powerful irritation, and to the violent irritative and sympathetic agitations of the nervous system. As yet the disease depended entirely on the external cause, the irritating poison, which, with all the morbid phenomena, would promptly, or, at any rate, very soon have subsided, had we been able totally to expel the offending material from the stomach by vomiting; but too much time had elapsed between the introduction of the poison, and the administration of remedies; for although the most powerful efforts were made to expel it from the stomach, to dilute it with copious mucilaginous drinks, and to neutralize it by the most approved means, there either still remained a portion of it in the stomach, or it had already had time to exert on this organ a powerful chemical, or contra-stimulating action. Thus, the pains and distress continued for some time,

but with less violence ; and in what may be considered the second period of the disease, the paleness of the visage, the coldness of the extremities, the vacillation of the pulse, the cold sweats, and the faintings, manifested the most alarming state of prostration ; in which we had reason to fear the patient would perish. In this state of things, exhibiting the most evident vital depression and state of contra-stimulus, we were obliged to have recourse to cordial mixtures, composed of Hoffman's anodyne liquor, wine, and remedies of this class. By these means the vital action was gradually revived, the pulse raised, the faintings prevented, the heat of skin increased, and the patient maintained sufficiently comfortable during the rest of the day. I, nevertheless, foresaw, if not as certain and necessary, at least as very possible, another change ; and what actually occurred afterwards tended, perhaps, to convince my colleague of the truth of some of my maxims. (See notes 16 and 19.) During the night which succeeded to this terrible day, the patient began to complain of insupportable heat of stomach, attended with thirst, inquietude, and universal heat. A violent fever was developed, the epigastrium became tense, the tongue extremely dry, the visage red, the heat of skin very great ; in short, there was exhibited the symptoms of a gastritis or inflammatory process, which could only be overcome by the most energetic antiphlogistic means : the diathesis of stimulus was so obstinate, that it required both time and constancy to save the patient. This case presents, if I am not deceived, a succession of different morbid conditions, the one developed by the influence of the other, though both were derived from the same cause. The deductions which naturally flow from this fact, can be easily applied to the etiology of a great number of diseases, which are originally derived from the application of some irritating power ; and can, perhaps, reconcile with my opinion on irri-

tation, the different opinions which prevail on this subject. There can be developed, I repeat it, in consequence of a powerful irritation, an inflammatory action or process of stimulus, (see note 13,) either produced by the chemical action of the irritating substance, or the mechanical lesion of the sensible fibres; or else, it succeeds, in some way, to severe pain, or very violent vital depression. (See note 16.) But such a *process of stimulus*, which continues after the irritating cause has been removed; which becomes more or less general in its character; which becomes the seat of a diathetic affection, and can be removed by general remedies; such a *process of stimulus*, I say, ought not to be confounded with the first *irritative* disorder, which soon diminishes and disappears, on the cause of the irritation being removed. It can also happen, either from the contra-stimulating action with which the irritating principle may be endowed, or from the disagreeable impression produced by the irritation, that a state of contra-stimulus succeeds to the irritation, becomes a general affection, continues after the removal of the cause, (see § 10, and note 21,) and be, in like manner, cured by general remedies. This *state of contra-stimulus* ought then to be absolutely distinguished from that of irritation, since this last is a condition altogether local, and can be cured by no other means, than the subtraction or neutralization of the irritating substance. I believe it will be useful to cite here, a paragraph from a letter which my illustrious friend, Professor Fanzago, wrote to me in 1810. "I send you a *Memoir on Digitalis*, which will make known to you my thoughts on the action of this remedy. Already, we were agreed as to its contra-stimulating power; but in taking into consideration, also, its local irritative action, I believe I have been able to reconcile facts and discordant opinions."

(30.) See *Bondioli*—Researches on the particular forms of general diseases: *Memoirs of the Italian Society*, Vol.

XII, second part. *Fanzago*—Essay on the essential differences of general diseases.

(31.) See *Researches on the Fever of Leghorn, on the Yellow Fever of America, &c.* part IV. § 119 to 130.

(32.) See the *Journal of the Medico-Chirurgical Society of Parma*, Vol. III. (on the effects of *digitalis*); Vol. IV. (notes to the answer, &c. of Dr. Hubert Bettoli); Vol. VII. VIII. IX. X. (on the depressing or contra-stimulating action of certain medicines.)

(33.) If John Brown constantly attributed every partial affection of excitement, every sthenic inflammation, for example a pneumonia, &c. to a phlogistic condition, or diathesis pre-existing in the whole system; if he always considered these partial affections as depending on a general condition of the system as its only source, and to be exactly proportioned to this pre-existing diathesis; that arose, I believe, from his never having practised medicine much, and submitted his theory to the numerous facts which are exceptions to it.—Whoever is much conversant with practice will readily agree with me, that, very far from every partial affection of excitement (we speak not here of secondary (*instrumentales*) diseases) being constantly derived from a similar degree of general affection, and exactly proportioned to that state of the system; it is rare, on the contrary, to find this perfect universality of affection; and that much more frequently, there is excited, in a part, a morbid action, which is afterwards propagated to the rest of the system; or even, though the general system be first affected, the phlogistic action increases much more in some given part, than throughout the economy, and greatly predominates in this part. Does it not arise from this cause, that very frequently the diathesis, or general state of stimulus, is subdued, whilst the morbid action in the inflamed part still continues with obstinacy, though this part be not disorganized, and be still susceptible of being

removed by general remedies? How frequently does it happen, that the general system is no longer in a condition to support remedies, which yet the affected part calls for, and thus presents a powerful obstacle to the speedy and entire removal of the inflammation? Very far from a pneumonia, an uteritis, or any other inflammation, being always maintained by a morbid action derived from the general system; they, on the contrary, propagate their morbid action to the general system: and although the system participates in the stimulus which affects an inflamed viscus, yet it is rare for it to obtain the same force and duration as in the part inflamed. I have shown, in my lectures, how the most ordinary observation and the most evident facts necessarily lead to this idea, and I have also shown the consequences which are derived from it in pathology and practice.*

(34.) I remember to have been often present at medical consultations, and sometimes to have taken part in them myself, when the practitioners of the ancient school were joined with our younger physicians, at a period when these last were entirely devoted to the principles of Brown's doctrine. How difficult was it to reconcile such discordant maxims! How essentially opposite was the method of treatment, and the remedies proposed! On the one side, it was judged necessary to purge, to dilute, to cool, in a word, to enfeeble; on the other, to strengthen, to stimulate, and to excite: one side proposed blood-letting, manna, tamarinds, saline drinks, or pills of rhubarb or aloes; the other ether, musk, ammonia, wine, and opium. In truth, such extremes could never be reconciled. It was necessary that one party should entirely yield, or else, if they both directed some-

* I cannot conceive how, after reading this note, Broussais could have asserted in his *Examen* of 1821, p. 154, that Tommasini had made, with all his coadjutors, and according to Brown, a general diathesis of stimulus in the phlegmasiæ to pre-exist to the local affection. See also note 12.

thing, one set of remedies would destroy the effects of the other. At present such contradictions do not occur, or are very rare, at any rate, to me, and all those who acknowledge the preponderance of diseases of the phlogistic diathesis over those of the opposite character. I have often consulted with old practitioners, who could not be supposed to be acquainted with the new maxims, at a time when they were scarcely promulgated, and yet, I have not found their opinion essentially different from mine on the plan of treatment to be pursued. When they have judged it necessary to prepare and dissolve morbid matter, or to expel it from the body by purgatives, cool the blood, temper the humours, excite transpiration, and attenuate the matter expectorated with antimonial mixtures and relieve the obstructions of the engorged viscera with aloes, rhubarb and soap, I have been willing to combat, with nearly the same remedies, a phlogistic diathesis or process of stimulus, more or less extensive. The phrases *diathesis of stimulus* and *contra-stimulant remedies*, often in the greater part of diseases, constitute almost the only difference between us and the disciples of Boerhaave; which difference, does not materially interest any essential maxims, or the plan of treatment; and practitioners can easily agree on denominations, when this agreement is attended with beneficial results to the sick.

My *Memoirs*, already cited, on the contra-stimulant action of some remedies, are inserted in the Journal of the Medico-Chirurgical Society of Parma (see note 22.) In these memoirs the contra-stimulant power of some agents has been deduced from facts and comparative experiments. Nevertheless, as it appears to me, that the opposite mode of action of stimulants and contra-stimulants, can be deduced, to a certain degree, from the first effects they produce on the stomach of a healthy man fasting, and as different judgments

have been formed on the opinion of this contrariety of action, I have thought it à propos to repeat here, what I have said in one of my lectures on contra-stimulant remedies, with which I considered it necessary to preface my clinical observations, in order that the students might fully comprehend the reasons and principles which governed my mode of treatment.

“ When I admit as proofs of the opposite action of two classes of agents, (for example, of vinegar and wine, of sulphuric acid and ether, of ipecacuanha and aromatics,) the sense of languor, distress, smallness of pulse and diminution of temperature, produced by the one class ; and a feeling of animation, with heat, redness and augmentation of the arterial pulsations produced by the other, it must not be supposed that I confine myself to the consideration of the effects they produce in the morbid state, either as causing disease or as acting as remedies : I am not ignorant that when once a morbid state is produced or a diathesis formed, the phenomena can no longer guide us in characterising it, and that similar symptoms, as Brown himself had remarked, can appertain equally to the two opposite diatheses. I know also that it is a fact, and Rasoni has shown it beyond contradiction, that feebleness of pulse, languor, and sense of cold, can be the effect of excess of stimulus, or occur in the hypersthenic diathesis ; and that in such cases nitre and antiphlogistics, purgatives and blood-letting, raise the pulse, increase the heat, and revive the animal machine. I know also, on the other hand, that frequency of pulse, morbid heat and preternatural redness, may be produced by the diathesis of contra-stimulus ; and that then, wine, ether, opium, and all other stimulants, by destroying the state of contra-stimulus, and by restoring the functions to their original vigour, remove excessive quickness of pulse, and diminish the morbid heat and redness. But, when I drew from this opposition of

effects, a proof in favour of the existence of contra-stimulants, I considered these effects in a healthy body, placed under circumstances which would not alter their character, or invalidate the inductions to be drawn from them. If, then, the primitive effects of acids, nitre, tamarinds, cream of tartar administered in doses so small as not to produce evacuations; if the primitive effects of these remedies, I say, on an empty stomach, and in a healthy individual, are paleness, chills, a sense of coldness, and sinking of the pulse; if the primitive effects of wine, aromatics and ether, under the same circumstances, are heat, redness of visage, and augmentation of arterial pulsation; if, finally, this paleness, these chills, this sense of coldness, and sinking of the pulse, occasioned in a healthy individual by acids, ipecacuanha, and nitre, disappear, and are destroyed by the use of wine and alcohol; and, if the excess of heat, the redness and arterial excitation, produced by the wine and alcohol, are calmed and destroyed by the acids and nitre, I have with good reason maintained, that these are proofs of the opposite action of these agents. When I designated the symptoms of prostration, and depression of excitement, as the primitive effects of contra-stimulant powers, I had in view, also, to discard the idea of indirect debility, which has been brought forward by the adversaries of the new doctrine. It is very true, that an excess of wine or of spirituous liquors, can produce languor, vomiting, paleness, and faintings; but, these substances, before producing this state of debility, denominated by Brown indirect, (that is to say, that morbid condition which has sometimes only the appearance of debility,) produces, in the first place, an increase of heat, and action; whilst the contra-stimulants designated, such as ipecacuanha, tartar emetic, the acids and nitre, never produce either heat or increased excitation in a healthy body, before throwing it

into a state of debility; but the symptoms of debility are the primitive and immediate effect of their action."

Besides, the demonstrative proofs of the *contra-stimulant* action of some remedies, such as tartarised antimony, digitalis, squills, ipecacuanha and nitre, the mineral and vegetable acids, aconite, cicuta, laurel water, belladonna, nuxvomica, gamboge. many bitters, the preparations of zinc, lead, iron, &c.; the proofs, I say, of the *contra-stimulant* action of these remedies, are at present so well understood, that I do not think it necessary to dwell any longer on them in this place. The cures obtained in the hospital of Milan, by the inventor of this doctrine, in many thoracic inflammations, by means of tartarized antimony given in large doses, and without producing any corresponding evacuations, those of similar diseases by means of digitalis, and of a great number of dysenteries, equally inflammatory, by the employment of gamboge, a remedy which, far from increasing the alvine evacuations, diminished and suspended them, are too well known to be called in question. The fortunate cures of a very great number of equally inflammatory diseases, obtained by means of these same remedies, by Professor Borda, in the Hospital of Pavia, during many years, and under the inspection of a great number of students, constitute unequivocal testimony on this head. (See, on this subject, the first number of the Journal of Omodei for 1316.) All the inflammations cured for ten years past, by myself, by Dr. Joseph Ambri, and many other physicians, by the same means, and whose history is inserted in the Journal of the Medico-Chirurgical Society of this city, may likewise be adduced; as well as a multitude of similar cases treated by Professors Gelmetti and Tinelli, Doctors Pisani and Borturi, Professors Bondioli, Fanzago and Brera, besides those which have been communicated to me more lately by Drs. Maggi, Talianini, Versari, Barbicciati, Bertolazzi, Laghi,

Fanti, Magistretti, Tamburini, and many others, without enumerating those which have been communicated to me by many able practitioners of this city, whose fidelity of observation and relation I can vouch for; and, finally, the removal of a very considerable number of undoubted inflammatory diseases by contra-stimulant remedies, which have occurred in our clinical hospital under the observation of a large concourse of students, may be added to the abundant proofs above referred to. Now, all these facts collectively, form a mass of evidence at once imposing and convincing: it seems to me a higher degree of certitude cannot be obtained in medicine. It is to be observed, also, that we cannot explain these cures, by regarding as irritants, the remedies which we believe endowed with contra-stimulant properties; for we cannot account for the good effects they produce in inflammatory affections, from their supposed faculty of contra-irritating or destroying by means of a new irritation, the *irritative state*, or *perversion of action*, produced by the disease. (See preceding notes, 21, 22, and 28.) Indeed, by means of tartarised antimony, digitalis, gamboge, laurel water, sulphuric acid, iron, &c., we cure, not only diseases which are suspected to arise from an irritative condition, or constituting a state of irritation, but also, diseases manifestly and simply inflammatory, produced by ordinary stimulant agents, (heat, wine, immoderate exercise, spirituous liquors, &c.) such as anginas, erysipelas, pneumonia, &c.; diseases, in short, which can also be cured, without counter-irritation, by blood-letting and cold.

But what shall we say of the experiments of Doctor Vincent Stellati, of Naples, from which it would seem, that the deleterious action of some contra-stimulants is counteracted and destroyed by the action of other contra-stimulants. The author had the goodness some years since to send me his memoir, in which he relates the experiments he made on

rabbits, and, had it not been for the events which have long separated us, and my more recent change of residence, I should, as I intended, have asked certain explanations of him, which I thought necessary before repeating his experiments. Doctor Bergonzi, of Reggio, a well informed young physician, and formerly my pupil at Parma, has lately communicated to me similar experiments, also made on rabbits, which seemed to confirm the results obtained by Dr. Stellati. I have commenced repeating these experiments before my clinical class, assisted by Dr. Gandolfi, Professor of Veterinary Medicine, and Comparative Anatomy. Already many rabbits have been sacrificed in this interesting investigation; the medicines employed were tartarised antimony, and laurel water. As yet, the results obtained, do not accord with those of my correspondents; but I forbear drawing any consequences from my experiments, until I shall have repeated them on a scale sufficiently extensive to lead to some useful deductions, when I will communicate them to the public.* In the meantime, whoever is acquainted with the

* The experiments here referred to, were continued, and have been since published by Doctor Comelli, Assistant Physician of the Clinical Hospital, in the second volume of the Scientific Transactions of Bologna, for 1818. These experiments, which were made with the greatest exactness under the direction of Professor Tommasini, and in presence of his class, give a different result from those of Doctor Bergonzi above alluded to. From his it appears, that tartarised antimony and laurel water, in a given dose, administered separably to rabbits, prove fatal, whereas the same dose of each given together, produced no bad effects, from which he concluded, that some contra-stimulants possessed the power of counteracting the action of other contra-stimulants; and, consequently, that the property of counteraction was not a property exclusively belonging to stimulants. It appears, on the contrary, from the experiments made at Bologna, with the greatest exactness, and frequently repeated, that forty drops of laurel water, and twenty-four grains of tartarised antimony in solution, always produced death in rabbits, either as one or the other of them was introduced into the stomach separately, or both of them given at once.

fundamental principles of the doctrine of contra-stimulus, and has been enabled to confirm them by numerous and repeated observations, will rest assured, that this doctrine will maintain itself unshaken, even though the results of these experiments should be verified.

Remarks on the Endemic Yellow Fever of New-Orleans during the summer and autumn of 1822. By ROBERT C. RANDOLPH, M. D. Surgeon in the United States Navy.

In the several departments of physical science, there are abundant sources of human regret, yet no circumstance is so well calculated to induce humility, as the reflection, that notwithstanding the vigorous efforts of genius, and the no less powerful agency of human industry, the consideration of the character and treatment of "yellow fever," has, at this late period, lost nothing of its interest, and but little of its claim to the undivided attention of the medical profession. In no situation has the disease in question assumed a greater variety of phenomena, than in the city of New-Orleans. During a period of six years, its destructive sway seems scarcely to have been more influenced by the visible vicissitudes of the vernal and summer seasons, than it was by the confessedly feeble means opposed by human art. In the temperate and wet year of 1820, and the arid, and long continued heat of the late season, the disease was observed to be equally malignant. As New-Orleans is situated on a soil, and in a latitude which seems, from analogy, to be particu-

larly adapted for the generation of pestilence, it is much less a source of surprise, that the disease should be often epidemic, than the circumstance, that it is not always so during the autumnal months. The law, however, which governs the occurrence of epidemic influence, is not less obscure on the one hand, than its agency is clearly and extensively experienced on the other. In this city it has become impossible to recur to the doctrine of importation, as during the late season there was not the smallest grounds to imagine a foreign source. No vessel had arrived in these waters with persons thus diseased, and the quarantine law had been rigorously enforced on all persons and vessels, however healthy, as well from the ports of the extreme north, as those of the West Indies, and Southern America. Indeed, from the extent and rapidity of its late ravages; its showing itself in every part, as well in the seclusion of the convent, as in the business streets of the city; the almost entire immunity of the native inhabitants; the occasional instances of repeated attacks in the same individuals; the circumstance of there not being an instance of its communication by diseased persons who fled to Madisonville and elsewhere; the impossibility of detecting any thing like a plausible chain of contagious communication in this city; and, finally, a total absence, in the symptoms of the malady, of any specific cutaneous, or other possible contagious secretion, are considerations, all of which must lead to the conclusion, that the late epidemic was indigenous, arising in part from local exhalations, and its character wholly independent of contagion.

A fortunate exemption from pestilence during the year 1821, had lulled strangers into the belief, that the quarantine law would prove an ample protection against future ravages. This circumstance will explain why such numbers remained, who, in former years, had consulted their safety by flight. This general idea of security, however, was somewhat dis-

turbed, from reports made to the Board of Health by two physicians, as early as the 30th of August ; but the disease was not epidemic until the second week of September. Alarm had now become general, and many hundreds moved off in various directions. Still the number of interments continued to increase until the daily reports of the sextons exceeded forty. There occurred a sensible check in its mortality about the latter end of October ; but the disease prevailed until the second week in December. The whole number of deaths, during the months of September, October, and November, exceeded fourteen hundred ; and it should be observed, that this mortality was confined exclusively to strangers ; a class of persons at the commencement of September, not exceeding three thousand in number. Difficulties but little less perplexing than the phenomenon of *epidemic influence*, present themselves, in investigating the operation of the causes of the fever. They appear to have been distinguished, with some propriety, into such as are primary, proceeding from an almost imperceptible change induced in the functional powers, by the gradual, and long continued application of heat ; and, into secondary and more immediate, as the direct influence of the cool nights of autumn, and the equally positive agency of local exhalations.

In most instances, the disease was announced by entire prostration of muscular power, succeeded by rigours, or a slight sensation of cold. The energy of the vital re-action was extremely variable, exhibiting all the different degrees of excitement from the ordinary, quick, and bounding pulse, to the slow and sluggish motion, indicative of venous congestion. In the former character of the malady, the countenance was flushed and tumid ; the eyes of a watery or slightly suffused appearance ; the skin dry ; the head, back, and particularly the lower extremities extremely painful ;

respiration frequent, sighing and anxious; the body restless; thirst fastidious; the tongue white or red, according to the duration of the attack; stomach irritable, ejecting *bile*; the bowels easily moved by ordinary cathartics; stools yellow, green, or brown, watery and fœtid; frequent, and highly coloured urine at the commencement, but deficient, and often suppressed as the disease advanced; the mind uniformly active and apprehensive. The duration of this form of the malady was altogether uncertain, either terminating immediately after the first paroxysm, or extending its course from the fifth to the tenth day, and sometimes even longer. On the examination of the bodies of Lindsay and Brown, who died of this form of the disease, the stomach was found to be but slightly inflamed; the bowels of a natural appearance; the liver and spleen exhibited marks of acute inflammation; the vessels of the kidneys tumid and enlarged, and the urinary bladder much contracted.

In the second, or *congestive* form of the fever, the symptoms of the several stages sustained a more undeviating character. The pulse, as has been remarked, was sluggish; the skin, either natural, or moist, cool and flaccid to the feel; the respiration laborious; the countenance relaxed and shrunken; the patient lay supine, with the arms and legs extended; the eyes of a heavy or muddy red; the tongue, as usual, afforded much insight as to the degree of injury sustained by the stomach; at the commencement, it was either natural, or of a leaden colour, and as the fever progressed, it assumed a livid red, or black, and became tremulous; insensibility to thirst; the stomach irritable, ejecting, in the first stages, a watery *untinted* fluid, and, at a more advanced period, the coffee coloured matter; the bowels obstinately constipated, and distended with flatus; hiccup; stools, when induced, either mucous, aqueous, and little offensive, or dark, ash coloured, bloody, like meat washings, tena-

cious and fœtid; the urine deficient, and suppressed; the pains of a dull, and more tolerable character than in the former variety; and the mind inactive, or, at least, indifferent in regard to the result of the disease. In this form of the malady, the duration was to the conclusion of the third, or the commencement of the fourth day. The diseased action was sometimes extended to the fifth; but never, or rarely, beyond that period. The bodies of Maloney, and a United States' marine, who died of this form of the fever exhibited, evident marks of disorganization of the stomach, the villous coat of which was denuded, and the muscular coat of a livid red; the intestinal canal, particularly the duodenum, gangrenous; the liver, spleen, kidneys, and bladder, did not exhibit marks of inflammation, but rather presented a flaccid and shrivelled appearance.

In both forms of the malady, the affection of the vital principle was always followed either by a slight or serious injury to the structure of the stomach. In the *developed* character, the disturbance of that organ was evidently secondary in importance to the extensive marks of inflammation sustained by the liver, spleen and kidneys. Whereas, in the *congestive* form, the laborious respiration, inactive state of the liver, and paucity of urine, were, it is believed, wholly dependent on a loss of sensibility in *these* organs, owing to its concentration in those of the first passages.

The influence of the temperaments in modifying the minute varieties of the symptoms, were doubtless, great; but the causes which effected the more enlarged distinction, constituting the *developed* and *congestive* forms of the malady, were dependent almost exclusively on occupation and modes of living. Hence it was, that among the more sedentary and temperate, the former character of the disease predominated; while the labouring classes, particularly the poor

Irish and Germans, were the chief victims of the latter. Of the former, not more than two in six died; while, of the latter, certainly eight out of every twelve were destroyed.

Such, it is believed, were the principal characteristics of the late epidemic, and though it sometimes happened, that the symptoms of both forms were so blended in the same individual, as to destroy all distinction of character; yet, this, it is proper to remark, was a rare occurrence. In general the difference was obvious, and fortunately, quite sufficient to direct the physician in the necessarily varied application of the remedies.

It would be a task as difficult as unprofitable, to attempt a description of the numerous modes of treatment, adopted by persons more anxious to relieve than capable of reasoning on the phenomena of this fever. It is sufficient to know, that the aggregate mortality was almost unparalleled. Although it is much to be deplored that even the most rational application of remedies was too frequently unavailing; yet none will argue that a practice based on principle was not in this, as in most other diseases, greatly more effectual than the wanderings of empiricism.

The smallest degree of reflection on the symptoms of the disease, and the appearances after death, were sufficient to assure the physician, that his office consisted simply in guarding against the result of vital re-action in the first place, and then to preserve as much as possible, an equilibrium in the circulation, with a consequent due operation of the functional powers of the animal economy.

The utmost attention and reflection were necessary in timing the application of the remedies, to the variety, and to the several stages of the disorder. Although blood-letting was a remedy essential in both forms of the disease; yet, while its immediate application was important, in the cases attended with acute pain and dry skin; in other in-

stances, as of venous congestion, it was often necessary to premise its use by the employment of warm frictions, and even of blisters.

The selection and application of the cathartics, afforded another, and no less important object for discrimination. Whilst of that character, where the determination was centrifugal, menacing the lungs, liver, spleen, and kidneys, with acute inflammation, the drastic articles, as gamboge, elaterium, and jalap, were indicated; in the other form, which, from the immediate injury sustained by the primæ viæ, may be termed centripetal, the use of drastics was always hazardous, and indeed, they were seldom retained on the stomach.

Large doses of calomel, from its acknowledged efficacy in visceral derangements, were exhibited, soon after the use of the bath, blood-letting and frictions. Half a grain of opium, combined with a scruple of calomel, usually operated kindly, whilst large doses of jalap, gamboge, and scammony, failed to excite the peristaltic motion. The uniformity of this fact, in the congestive form of the disease, would countenance the conclusion, that drastic substances tended to the disorganization of the vessels of the primæ viæ, already excited into violent action. Calomel in small and repeated doses, exhibited to induce general mercurial action, was wholly useless, if not pernicious: ptyalism seldom ensued, and only in the mildest cases of the disease, which would doubtless have terminated favourably, by the use of antiphlogistic regimen merely. On the other hand, there were many instances wherein the diseased and mercurial actions alternated with each other; and the result was always destructive to the excitability, or principle of life. For the purpose of restoring lost sensibility to the lungs and kidneys, seneka and turpentine acquired some reputation.

In order to induce re-action in the secondary forms of both varieties of the malady, different articles were admi-

nistered ; but it is almost unnecessary to remark, that in yellow fever, every thing depends on impressions made at the very commencement of the diseased action. If disorganization has ensued, it is manifest, that human aid must prove ineffectual; and if it has not, it is equally obvious, that health will return by the proper use of food only. Rest and time, were essential to a restoration of the functional economy, and both tonics and stimulants were found to be pernicious.

REVIEW.

A Treatise of the Materia Medica and Therapeutics by JOHN EBERLE, M. D. Editor of the American Medical Recorder, Member of the American Philosophical Society, &c. &c. Two Vols. 8vo. pp. 977. Philadelphia, Webster, 1822. (Continued from page 80.)

The first subject which our author treats in his second volume is narcotics, and it must be confessed that their therapeutic relations are much less defined than those of any other class of remedies ; hence it is not to be expected that the philosophy of their operation can be discussed within any reasonable limit in a work which is intended to give a syllabic view of therapeutics in general. Dr. Eberle appears to have been aware of this difficulty, and has restricted his remarks to practical points without attempting a learned disquisition on the rationale of their operation : the following observations are all the book offers on the general topic.

“ *Narcotics.* These are stimulants whose secondary effects are a diminution of the vital powers, producing torpor, insensibility, and sleep.

“ As the more prominent effect of this class of remedies is a

torpor of those powers of the animal economy which are dependent on the nervous system, so we may infer, with reason, that the action of narcotics falls principally on the sensorium commune and its appendages. This, indeed, seems to be demonstrated by direct experiment with regard to several powerful articles of this class. Brodie has rendered it extremely probable, by a series of experiments on animals, that the essential oil of almonds, the juice of aconite, the empyreumatic oil of tobacco, and the woorara, produce their deleterious effects on the system, by directly destroying the functions of the brain; and that death, from the influence of these substances, takes place, because respiration, which is entirely dependent on the brain, ceases, when the functions of this organ are destroyed.

“It has been supposed, that there is some one particular substance to which narcotics owe their peculiar effects; and many researches have been instituted to detect this supposed narcotic principle. Upon this subject, however, nothing satisfactory has as yet been brought to light. Certain substances, it is true, have been extracted from articles of this class, which possess, in a highly concentrated form, their peculiar virtues. Such are morphia and the prussic acid. As these substances, however are distinct, and differ in their properties, it is evident, that neither the one nor the other can be regarded as the narcotic principle. Besides, the greater number of narcotics contain neither morphia nor prussic acid. These two concentrated substances are therefore, nothing else than distinct and specific narcotics, which, in their natural state, are found united with other substances.

“Narcotics have been regarded by some as producing direct sedative effects upon the system. Cullen placed opium at the head of the sedatives. An attentive observation, however, of the progressive effects of these articles, cannot fail to establish the conviction, that this sentiment is at variance with the actual phenomena arising from their action on the living system.

“In moderate doses, these substances increase the activity of the cerebral functions. The ideas are more vivid and rapid in their succession. Hilarity, and a general agreeable feeling of mind and body—a more ready and vigorous command of the will over the voluntary muscles of the body—a livelier and more excursive imagination—a quicker perception of the relation of things—courage, and vigour, all result from the moderate influence of this class of remedies, and indicate the excited state of the system. If, however, they are applied in augmented doses, the brain soon becomes over excited, and torpor and debility is the result. If

the dose be still more increased, sudden diminution of the vital powers, vertigo, delirium, coma, convulsions, and death, ensue.

“ The class of narcotics furnishes us with some of the most important remedies we possess. They are applicable in almost all varieties of disease in some stage or other of their course. They are particularly indicated in affections of the nervous system, attended with pains or spasms ; and in a morbid irritability of the brain and its appendages, unaccompanied by an inflammatory condition of the general system. They also have a tendency to lessen the mucous secretions ; but, in general, they augment those of the serous and urinary organs.

“ Narcotics, more than any other class of medicines, lose, by repetition, their action on the system. It is, therefore, necessary, where a continued employment of such articles is required, gradually to augment the dose, in order to acquire their due operation.

If we were disposed to take exceptions against any part of this work, we should direct our attention in an especial manner, to the loose definitions in which it abounds, and the confidence with which sequences are stated as facts : the former are frequently very imperfect, and the latter are reasoned from, as though they were results constant. The definition of narcotics, for instance, is much too short to be under any circumstances complete, and short as it is, is not just in fact ; narcotics are not all stimulants primarily, nor do they all secondarily produce torpor, insensibility, and sleep ; neither their quality nor their power, as here expressed, are at all essential to their character, and destitute of both, they may still be narcotic ; for the stimulant effect of some of this class, if allowed at all, is by far too transient to admit of detection, and the effects, how much soever they may resemble sleep, cannot, upon close examination be mistaken for it, for there is no diminution of the vital powers during sleep ; though this last is a necessary consequence of the exhibition of narcotic medicines. If there be any one branch of human knowledge which, is more than another, calculated to impress us with a feeling of diffidence in the use of what might

in other circumstances be viewed as fact, it assuredly is therapeutics; and if authors were more intent on generalising results than reasoning from them, in the confidence that they are uniform, we should not so often be compelled to exclaim in the bitterness of disappointment, that doctrines which we had been taught to believe capable of explaining the phenomena of disease, and the operation of remedies, are utterly deceptive in their practical application; and if the remark has any weight when viewed in relation to the effect of the most simple remedy, with how much more force does it apply when taken in reference to a class of remedial agents whose chief operation is directed to the brain, of which in relation to its combined and diffusive actions, we are ignorant as children? The books of medicine abound with *false facts*, which are either results seen in a *limited view*, or effects *contingent*, and *not* necessary; both the one and the other are prolific causes of that uncertainty, which till this hour attaches to our best digested systems of medicine; and nothing but the most patient experience abstracted from the prejudice of theory, will enable us to make any tolerable progress in the pursuit of truth, without a peradventure that we shall be obliged to retrace our steps. We have no wish by the above remark, or any others that may escape us, to inculcate an obstinate scepticism in relation to all medical doctrines which are not based on experiment; but it is our duty to teach, and it is the interest of the profession to learn, that the facts upon which doctrine is founded are as liable to be deceptive as the reasonings themselves; and that it is our business to scrutinize them with severity before we allow them to have the weight of testimony. We can calculate with unerring precision in natural philosophy, the various powers necessary to overcome any known resistance, and measure with mathematical accuracy the effects of all mere mechanical agents; and although we are as ignorant of the

principle of gravitation, as we are of the inscrutable connection between mind and matter ; yet the laws which control its operation are constant, equable, and eternal as its existence, and the results therefore, are facts, of the truth of which it is impossible to doubt : not so in sciences which are conversant with beings of a mixed nature, who are subject to all the laws which govern the material universe, whilst they are controlled by others of a higher order, which escape our detection or baffle every attempt at illustration.— The impressions made on living organized matter are so numerous, complicated, and various, as to render any attempt at their classification with reference to the agents producing them, if not impossible, at least so imperfect in many cases, as to defeat all calculations of consequences predicated on the data which they exhibit. That this is true no person can doubt who reflects on the pathology and therapeutics of nervous diseases and their remedies. We have been led to make these remarks from reading that part of Dr. Eberle's book, which treats particularly on this subject. We have always been of opinion that the medicines known in works on *materia medica* as narcotic are less calculated in their nature and operation to admit of general directions for their use, than any others with which we are acquainted ; this arises not so much from a deficiency of our knowledge of the articles themselves, or a want of due attention in noticing their prominent effects ; but from the immense range of their operation, which renders it next to impossible to mark all the changes which result from their exhibition ; and the consequence has been, that, with very few exceptions, they have been administered as *tentative*, the prescriber depending more on the phenomena which the trial may produce, than on any known results derived from the reasonings or experience of others.

It is impossible, without some such apology as above stated, to account for the remarkable discrepancies which occur in the works of authors who profess to reason from their individual experience; nothing but the fallacy of the results, which they have honestly assumed as facts, can in many cases exonerate them from the charge either of blindly attempting to direct medical opinion, or sacrificing the interests of truth to the mere distinction of authorship. On some future occasion we shall take an opportunity to comment on the subject of medical testimony; the undefined and unsettled character of which has hitherto retarded the progress of medicine; as neither our limits, nor our leisure permit us at present to enlarge upon this interesting subject.

The remarks of Dr. E. on the physical qualities, and general effects of opium, (to which we are obliged to confine ourselves,) though not as full as the importance of the medicine demands, have the merit of combining as much information as could be conveniently embraced within such a narrow compass.

“ Opium deserves to be placed at the head of this class, whether we consider its importance as a remediate article, or its more decided operation as a narcotic. This is the inspissated juice, obtained from the capsules of the *papaver somniferum*, a plant indigenous to Persia, Arabia, and Egypt, and cultivated with us in gardens. This article, as it is found in the shops, is of a dark reddish brown colour externally, and internally of a dusky red. It is opaque, compact, of a peculiar disagreeable, narcotic odour, and bitter acrid taste, with some degree of warmth. It is inflammable, and partly soluble in water, alcohol, ether, wine, vinegar, and citric acid. The watery solution becomes transparent on filtration, and possesses the property of reddening the colour of litmus. By adding to this filtered solution, pure ammonia, the carbonates of fixed alkalies, the solutions of oxymuriate of mercury, nitrate of silver, subacetate and acetate of lead, the sulphates of copper, zinc and iron, and the infusion of galls, precipitates are formed.

"Opium contains, 1. A volatile substance which passes off partly in the form of vapour, and partly in union with the water driven over in distillation. 2. Gum. 3. Resin. 4. Gluten which is perfectly insoluble. 5. A concrete waxy oil. 6. Gluten, sulphates of lime and potash. 7. A peculiar alkaline crystallizable substance. 8. An acid. 9. And alumina. These constituent parts all possess, in a greater or less degree, the peculiar narcotic virtues of opium. Water distilled from this substance produces inebriety and sleep, according to the experience of Nysten. The watery extract is very active. The extract obtained by alcohol is, also, strongly narcotic, though less so than that which is obtained by cold water; and Nysten asserts, that it does not inflame the stomach. Paris, on the contrary, says, that the alcoholic solution of opium is more highly charged with its narcotic principle than the aqueous.

"The alkaline substance seems to be the principle to which the narcotic virtues of opium are owing, "and to which the appropriate name of *morphia* has been assigned" The acid principle has been denominated the *meconic acid*, and exists in combination with the *morphia*; so that this latter substance, as it is obtained from the opium, exists in the state of a *meconiate*, or, perhaps, *supermeconiate*. These two substances were first detected by Derosne and Sertuerner, who devoted much attention to the chemical composition of opium. Robiquet asserts, that the salt of Derosne is not a *meconiate* of *morphia*, but an acid possessing peculiar properties, which may be obtained from opium, by a somewhat elaborate process. The *meconic acid*, in a separate state, does not appear to possess any active qualities. *Morphia*, however, is powerfully active, particularly when dissolved in olive oil.

"The effects of opium are evinced, in a greater or less degree, upon whatever part of the system its application is made. When introduced into the cavity of the peritoneum, it speedily produces convulsions and death. According to Orfila, "the effects of opium are, in general, more decided when it is injected in glysters, than when it has been introduced into the stomach." By this we are not to understand, that the same quantity produces as much or more effect when injected into the rectum, than when taken into the stomach, but, simply, that the medicine, when applied to the former part, in a suitable dose, acts in a more prompt and decisive way, in consequence, perhaps, of its not being subjected to the action of the digestive powers in this situation, a circumstance which must very generally take place, when it is brought into the

stomach. According to Nysten and Orfila, opium acts more energetically when injected into the cellular texture of the body.

"The same writers state, also, that opium does not destroy the contractility of the muscles to which it is applied; and that a heart will continue to contract for a considerable time, when plunged into a solution of opium. This, however, is contradicted by Wilson Philip, who states that, although he found opium, when applied to the external surface of the heart and alimentary canal, to produce no sensible effect on their muscular power; yet, when brought in contact with their internal surface, it produced "the same effect as when directly applied to the muscular fibres themselves, immediately, unless the quantity be extremely small, impairing their power, and destroying it instantly, if the quantity be considerable."

"Opium is said to produce no particular effects when applied immediately to the brain or nerves, and yet it is supposed, by the same physiologists who make this assertion, that the poisoning effects of this article depend on its absorption into the circulation, and its direct action upon the brain. This contradiction, as it appears to me to be, can only be reconciled by supposing, that the action of this narcotic is less powerful when applied directly to the medullary substance of this organ, than when it acts, through the medium of the blood, on the internal surface of its capillary vessels.

"The question, whether opium is to be regarded as a sedative or an excitant, has been much agitated, and it is still considered by some, *sub judice*, as an unsettled point. The most prevalent opinion, however, at present is, that opium is unequivocally a stimulant. To me, indeed, nothing seems to be more demonstrable than this point. Orfila quotes Tralles as being the first who held opium to be a stimulant. To the celebrated John Brown, however, must be ascribed the merit of having fully demonstrated the excitant properties of this article.

"The effects of opium vary greatly according to the quantity given. In small doses it sensibly excites the nervous and vascular systems. The cerebral functions in particular, are rendered more active and energetic. Volition is stronger and more prompt, and a temporary vigour is felt in all the voluntary exertions of the body. Vivacity and joyfulness, courage and ambition, indifference, or rather defiance to the ills of life; and, in short, all those delightful feelings which spring from a conscious energy of mental and bodily power, and an absence from painful or unpleasant sensations, arise from a well regulated dose of this medicine.

"If the dose be augmented, its narcotic effects become more con-

spicuous. A species of drunkenness ensues ; the blood becomes congested in the vessels of the brain ; the mind is unsettled and incoherent ; voluntary motion is performed with less freedom ; the sensibility is diminished : the eyes are suffused, and vision is indistinct. Finally, the voluntary motions are suspended ; the sensorium commune ceases to exercise its control over the animal functions of the system, and profound and heavy sleep weighs down every conscious faculty. If the dose has been very large, the sleep becomes more and more lethargic ; the sensorial power becomes rapidly impaired, in consequence of which, respiration is imperfectly performed ; the blood, therefore, ceases to receive its due proportion of oxygen in the lungs, which still further tends to diminish the cerebral functions, until they finally stop altogether, and with them all the other movements of the living economy.

“ Such are the immediate effects of a large dose of opium. There are other consequences, however, which follow its long continued or habitual use, demonstrating with equal force the deleterious influence of this article upon the living economy, when improperly taken.

“ The habitual opium taker, unless he is under the immediate influence of this potent narcotic, evinces all the symptoms of physical and intellectual imbecility. He is timid, low-spirited, and pale ; he experiences a tormenting anxiety of feeling ; is totally disinclined, as well as unfit for mental and bodily exertion ; he is peevish, and feels pains in different parts of the body ; his extremities are cold ; indigestion torments him ; he cannot sleep, and feels a tremour throughout all his body. When the system is entirely free from the influence of the accustomed stimulant, torments of the most distressing kind are experienced.

“ The following may be, therefore, enumerated as ascertained effects of the operation of this narcotic :

“ 1. Its primary effect in a small or regular dose is, an increase of the force and frequency of the pulse. When given in a very large dose, its primary excitant operation is extremely transient, and the pulse almost immediately becomes fuller and slower.

“ 2. It diminishes muscular irritability, and lessens the peristaltic motions of the intestinal canal. It not unfrequently, likewise, occasions a difficulty and pain in making water.

“ 3. It lessens some of the secretions, whilst it augments others. Thus, it diminishes the secretion of the gastric and pancreatic juices, and the mucus of the bowels, occasioning thereby a dryness of the mouth, fauces, and intestinal canal, attended by thirst, inappetency, indigestion, and emaciation. It lessens, also, the

mucous secretion of the bronchia and nose. The secretion of bile, too, is diminished, according to the opinion of some, by the action of opium. The serous secretions, on the contrary, especially that of the skin, are considerably augmented by the use of this article. In many persons it produces a singular pruritus, and in some a papular eruption, on the surface of the body. It increases, also, the aqueous exhalation from the lungs.

"4. It at first excites, but afterwards lessens the sensorial powers; inducing torpor, insensibility, and sleep. Hence its applicability in all cases where there is pain and nervous irritability, unaccompanied with an inflammatory condition of the system.

"Opium is generally employed in substance, or in the form of tincture. Where we wish to produce a sudden impression, the tincture should be given; as in this form it will be immediately diffused through the stomach, and more speedily applied to an extensive surface of its inner coat, than when given in the shape of a pill, which requires a considerable time for its solution, and its entire application to the part upon which it is to act."

In speaking of the practical application of the article, considered as remedial, Dr. E. has rather contented himself with adducing authorities, than been anxious to correct the mistaken views into which many authors of known celebrity have fallen, from indulging ideas of its general operation much too limited to claim our entire confidence. It is by no means strange, that men holding diametrically different opinions of the action of the remedy, should prescribe it with different intentions, in the same diseases; it is both reasonable and natural, so long at least as the great question on which they differ continues *sub judice*; but that both sets of opinions should be quoted as authoritative to direct us in its practical uses, after experience, the most ample, has determined, that but one is right; is certainly extraordinary, and much more calculated to impair the value of the work by distracting the judgment, and shaking the confidence of the reader, than to add to its character by furnishing the materials upon which he may exercise his ingenuity in detecting error. Dr. E. has furnished us with authority for the remedial exhibi-

tion of opium in typhus, hospital and intermittent fevers; in gastritis, enteritis, and acute rheumatism; in gout, catarrh, and phthisis, and many phlegmasial diseases, as well as hemorrhages, and dyspeptic, and convulsive complaints; the whole forming a catalogue of infirmities comprising as many symptoms of contra-indication as could well obtain, in a tolerably extensive pathological abstract. We mean not to question the authorities upon which all these practical lessons rest, but we trust we may be permitted to offer an opinion on the probable tendency of such unqualified and indiscriminate prescription. We have no fears of being successfully contradicted, when we give it as our belief, that from this list, the whole number of diseases attended by inflammatory action, either local or general, should be expunged, except, perhaps, such as involve organs liable to be rendered excessively irritable by diseased action, or are usually attended with great pain, as affections of the alimentary canal, or spasmodic complaints of the excutory ducts; and even in these, its administration is rather palliative than curative, and better calculated to prepare the way for the use of other remedies, than to be effective without their assistance. Against its exhibition in the hot stage of intermittents, as recommended by Cullen and Lind half a century ago, we beg leave to enter our solemn protest, as we believe its propriety cannot be maintained by any correct reasonings on its mode of operation, any more than it can be supported by the success of experience. Whatever may be the difficulties attending the modern medical creed, *that all fevers are phlegmasial diseases depending upon local lesions*; this much is certain, they are all prone, by their continuance, to produce congestion, or effusion, in some of the viscera, or cavities of the system: neither of which can occur without antecedent inflammation, which cannot but be aggravated by any stimulus, whatever be its nature, which is dif-

fusible in its operation: opium, therefore, is an improper remedy, unless we are reduced to the necessity of palliating a greater evil than itself will produce, in order to gain time for the application of other more appropriate medicines.

Camphor. This article of the materia medica, we have always considered as possessing a very equivocal character; that it possesses active virtues, no one can doubt, who has made trial of the remedy, though it is scarcely less certain, that very little calculation can be made upon the exhibition of any given amount; it is perhaps for this reason, that it is rarely administered unless in combination with other medicines. The following passages from this chapter, are selected as the most interesting to the general reader.

“ It is still a disputed point, whether camphor should be considered as a diffusible or narcotic stimulus. For my part, I am well satisfied, that its proper place is among the narcotics. Its action, like that of the most unequivocally narcotic substances, is especially directed upon the sensitive or nervous system. The heart and arteries are but slightly influenced by its operation.

“ Taken in a moderate dose it exhilarates, and produces a gentle diaphoresis, without materially increasing the force and frequency of the pulse. In very large doses, it excites vomiting, tremours, anxiety, syncope, vertigo, insensibility, epilepsy, coma, or morbid wakefulness, and produces a very obvious diminution of the pulse. Dr. Alexander, of Edinburgh, states, that after having taken one scruple of camphor, his pulse became somewhat slower, without experiencing any other sensible effect from the medicine. He afterwards swallowed two scruples, which had the effect of immediately sinking his pulse from seventy-seven to seventy, but which returned to its former frequency at the end of about thirty minutes. A giddiness then came on, which gradually increased until he became entirely insensible. After a short period, he was seized with strong efforts to vomit, which were succeeded by convulsions and transient mania. I have lately taken several scruple doses of camphor for the purpose of observing its effects on the circulation, and found that the pulse, though slightly increased in fulness, was not in the least increased in frequency. I experienced some giddiness, and a sensation of fulness in the vessels of the head. Alibert observes: “ The greater part of the phenomena that have hitherto

been noticed as to the effects of camphor, either in animals, or in the human system, appear to correspond with those which result from the action of opium. Like opium, its action is promptly directed to the brain, and the whole nervous system. This remedy seems to possess the power of at once producing a torpor of this organ, and of increasing the irritability of the muscular fibre. This difference, however, has been remarked between the action of opium and camphor; opium begins by irritating, and afterwards induces torpor and insensibility; camphor, on the contrary, first produces a languor in the system, and to this languor succeeds a violent excitement in all the organs of the animal economy.

“Camphor admits of a great variety of remediate applications. In the treatment of typhus fevers it has been particularly recommended by the French and German physicians, and it is, indeed, a medicine of very considerable utility in diseases of this kind. In the latter stage of typhus, when the pulse is small, the skin dry and hot, and delirium, wakefulness, subsultus, and other symptoms of nervous irritation exist, camphor will often produce great benefit. Its power of allaying the delirium, and other nervous symptoms of typhus, is, I think, more decisive than that of any other remedy we possess. I have seldom omitted to prescribe it when these symptoms were present, and I have often had occasion to be pleased with its effects. Burdach says, that in typhus, accompanied with inflammation of the lungs, liver, or bowels, camphor, in union with tartar emetic, nitre, or calomel, may be employed with great advantage. In the pneumonia typhoides, I have known it to be employed with small doses of opium and rad. serpentaria, with decided benefit.

“In the treatment of puerperal fever, camphor has been recommended as a remedy of great usefulness. In this disease, however, its powers are but little to be depended on. In the early stage camphor would be hurtful, and in the latter inadequate. It cannot be too much impressed on the minds of practitioners, that copious and prompt depletion conjoined with cathartics, and used within the first twelve, or at furthest twenty-four hours, are the only means we possess upon which any reliance ought to be placed, for arresting the fatal progress of this disease. After its inflammatory symptoms have been subdued, and much prostration exists, camphor may be used with advantage. In such cases it is best given in union with opium.”

We pass over the remainder of this and the next chapter on antipasmodics, and come to the article *stimulants*, pro-

perly so called, which are defined to be "such articles of the *materia medica* as act more exclusively on the heart and arteries, producing a full, strong, and frequent pulse, a general warmth and fulness on the surface, and a temporary vigour of the general powers of the system, without manifesting any particular tendency to allay pain, or spasm, or to produce sleep and insensibility." Dr. E. does not appear to think that the old distinction of this class of remedies, into the permanent and diffusible, is of any moment, and perhaps justly, seeing that it is obvious; and has therefore arranged them without reference to any other plan than his own convenience. The first in order is *Volatile Alkali*; it is confessedly the most essential article of this class, and possesses powers to excite the system, which are more under the control of the physician, than any other stimulant with which we are acquainted, it possesses also an advantage over all others, which in many cases is a great desideratum, viz. operating with effect without leaving a residuum which might control the actions, or clog the functions of the alimentary canal; from its diffusibility, the necessity of giving it in large doses is obviated, and as it ceases to be a local stimulant almost so soon as swallowed, there is little danger to be apprehended from it even in diseases where there might be reason to fear some local irritation, perhaps some acute inflammation of the stomach or bowels. It is for this reason that it is found so generally serviceable in all the forms of gastric, intestinal, and low typhoid fevers, where other stimulants require to be used with great caution in order to guard against the effects of their local operation. Though pressed for room, we cannot omit to transcribe the following passage:

"The carbonate of ammonia is a very active stimulant, and may be employed as such in a variety of cases, with peculiar advantage. In typhus fever it has been particularly recommended by

Huxham, Pringle, and others, and some have considered it superior in this disease to any other stimulant we possess. "In the more advanced stages of the disease," says Dr. Chapman, "when the indications of increased debility come on, the volatile alkali, either alone or in combination with opium and wine, is, of all the remedies which I have ever tried, one of the most decidedly useful." In my own practice I have been much in the habit of employing this remedy, and it has appeared to me, to do more good in the advanced stages of typhus, than the other stimulants usually resorted to in this disease. It may in general, be given at a much earlier stage of the disease than other remedies of this kind; for, instead of producing a hot and dry skin, like wine, camphor, &c. when given before the stage of excitement has passed by, it commonly excites a gentle diaphoresis, rendering the skin moist and comfortable, while the action of the heart and arteries is raised. "In one respect," says Dr. Chapman, "the volatile alkali differs from every article of the class to which it is attached, and it would seem from all other medicines. The peculiarity to which I allude, is this, that the excitement it raises approaches more nearly to that of healthy action, and hence it may be resorted to earlier, than stimulants generally, in the inflammatory affections."

Many of the practical remarks on the use of the *oil of turpentine* are important, and if we judge from its limited use, we should incline to believe that its virtues are not generally known, and certainly, that they are not properly estimated.

On the subject of vinous spirits in the treatment of fevers, Dr. E. offers the following remark, which in the present state of the practice of physic throughout the interior of this country, must be considered very pertinent; though we cannot withhold the expression of our conviction that their use is by far more extensive than a just view of the pathology of these diseases will warrant.

"In the treatment of typhus fever, brandy and wine have long been considered as a principal remedy. When the stage of excitement is over, and stimulants are indicated, there is indeed, no remedy more grateful and beneficial than the prudent use of generous wine. Where the prostration is great, it may be given in

very large and repeated doses without inducing the slightest intoxicating effects. Whenever this is the case, and it produces a fuller, stronger and slower pulse, and renders the skin moist, and of a natural warmth, we may be assured that its influence is beneficial. If, however, it render the pulse more frequent and corded, flushes the countenance, and induces restlessness, delirium, thirst, and a dry and burning skin; then its effects will be injurious, and we are admonished of the necessity of at once laying aside its use."

Diaphoretics. On this subject, Dr. E. has extended his remarks to a considerable length; they are very pertinent, and for the most part very unexceptionable; though here, as in many other places in his book, his predilection for humoral explanations is manifest, although the illustration is obvious without their assistance.

"Obstructed perspiration," says he, "may depend on very opposite states of the general system. We find it connected with high febrile action, and also with a slow and languid circulation. It is evident, therefore, that the remedies which are calculated to restore this function when its defect or loss is associated with high vascular action, must be very different from those which are calculated to excite it, in an opposite state of the system. In the former case, our diaphoretics must be such as have a direct tendency to lessen the action of the heart and arteries, and at the same time relax the mouths of the transpiratory vessels. Hence, cold ablutions, refrigerants, antimonials, and bleeding, are very often directly and manifestly diaphoretic. Where, on the contrary, torpor of this function is accompanied with a languid circulation, and a pale, shrivelled, and cold skin, recourse must be had to diaphoretics of a stimulant character. Although, perhaps, every stimulant may, under certain circumstances, produce sweating, simply by increasing the action of the heart and arteries, yet it must not be supposed that the stimulant diaphoretics act solely by giving a general increase of momentum to the blood, since many of these remedies undoubtedly possess a peculiar tendency, not only to determine the circulation to the capillaries of the cuticular surface, without materially augmenting the action of the heart and arteries, but also specifically to excite the activity of the perspiratory vessels. Diaphoretics, therefore, act either by relaxing the mouths of the perspiratory vessels, or by increasing their activity, or by esta-

blishing an increased flow of blood to them, or, finally, by at once producing both the former and the latter of these effects.

“ Although many of our diaphoretics are manifestly stimulant in their primary operation, yet by the increased evacuation which they produce, they are all ultimately anti-phlogistic in their effects. Those of the refrigerant class are eminently so, and they, therefore, constitute very important remediate means in all acute febrile disorders. It is not, however, simply by the depletion which they produce that they act beneficially in acute affections. Much advantage is undoubtedly derived from the evaporation and consequent abstraction of morbid heat which constantly takes place during diaphoresis. In this way a very considerable source of irritation is obviated. There is another effect by which these remedies do good, especially in the inflammatory affections of internal organs. By increasing the flow of blood to the skin, they relieve, in some degree, the internal inflamed vessels, and thus, by a kind of local abstraction from the affected organs, often contribute materially to the reduction of the disease.

“ Health is very intimately connected with the regular performance of the perspiratory function. Whenever the transpiration by the skin is suddenly checked, more or less derangement of the system is invariably the consequence. That portion of the circulating fluid which nature designs to be cast off by the cutaneous emunctories, as no longer fit for the purposes of the animal economy, is retained, and becomes a source of morbid irritation to the heart and other organs. *That obstructed perspiration may prove detrimental to health in this way, can, I think, hardly be doubted, for it is obvious, that the accidental obstruction of any important emunctory must give rise to an accumulation of recrementitious elements of the blood, and impart to it morbid qualities. Frequently the injurious consequences that might result from the retention of the perspirable matter, is in part, if not wholly, obviated by the vicarious action of the intestinal emunctories, and particularly of the kidneys.* There is, however, another mode in which the sudden repulsion of the perspiratory discharge may excite morbid phenomena in the animal economy: It disturbs the regular current of the circulation; the blood retreats to the vessels of the internal organs, giving rise to congestions, inflammation, and fever. One of the most frequent external causes of obstructed perspiration is exposure to a cold and humid atmosphere. When the body is exposed to the influence of this cause, the circulation in the sub-cutaneous vessels is immediately and manifestly diminished, both in velocity and in volume, and the skin becomes pale, shrunk, and cold. As a natural and necessary result of this con-

dition of the circulation on the surface, the blood is repelled to the internal vessels, and much of that recrementitious fluid which nature intends, and the welfare of the economy requires, to be cast off by the skin, is retained in the system. *There is, therefore, under these circumstances, a superabundant portion of deteriorated blood forced upon the heart, which, acting upon it as a preternatural stimulus, brings on sooner or later re-action, or the stage of febrile excitement.*

“From the manifest influence, therefore, of the perspiratory function over the health of the body, it is obvious that those remedies which are calculated to restore the regular action of the cutaneous exhalants, must be of much importance in the cure of diseases. Sudorifics have, indeed, been among the earliest and most common remedies in every nation. Valuable, however, as their judicious employment undoubtedly is, there is perhaps no other class of medicines which has been so frequently and perniciously abused in the treatment of diseases. Van Helmont and his followers, believing that acute diseases were to be cured by expelling some morbid matter after its proper concoction, employed the most stimulating sudorifics together with high temperature, in every grade of febrile exacerbation. This practice appears to have been exceedingly common during the seventeenth and early part of the eighteenth centuries. It is easy to perceive that its effects must have been highly pernicious. It is not, however, to be concluded from this, that diaphoretic remedies are injurious, even in the most vehement febrile excitement. Quite the contrary, indeed, is the fact; for diaphoresis is, perhaps, always salutary in fevers of high excitement, and the more so in proportion as the arterial action is vehement. The utility or perniciousness of this discharge, in acute disorders, depends on the means that are used to excite it. It is the employment of heating or stimulating remedies for this purpose, that renders the practice so injurious. If we elicit perspiration by cool applications, or by the use of diaphoretics of the refrigerant kind, we in general derive unequivocal advantage from it.”

That the retained perspiration should prove detrimental to health, by interfering with and deranging the equable action of the sanguiferous system, no physician can doubt, who has ever been at the trouble of thinking; but that its qualities are so altered as to render it capable of imparting to the circulating fluids any morbid taint: or that it should ope-

rate in any other manner than an indirect cause of irritation to the heart and arteries, is a position, not only not proved, but utterly unsusceptible of proof, and even if it was not, would be entirely unnecessary in the explication of the phenomena, which follow it so closely as to be charged as its effects. The fact, that many persons have little or no transpiration by the skin; that nine times in ten, when a check of this secretion does take place, the system relieves itself by an increased discharge from some vicarious emunctory without occasioning any derangement of the circulation; and the singular and apparently necessary sympathy which exists between the skin and kidneys; all show as strongly as negative testimony can do, that the retention of the secretion *does not*, of necessity, involve a change of its qualities: for if it did, how should we explain the fact of its transfer from one system to another without occasioning fever? That the water accumulated in various cavities in cases of dropsy is very similar in its qualities to the matter of perspiration, is a truth equally supported by reason and observation; and yet no humoral pathologist with whom we are acquainted, ever was so wedded to his theory, as to attempt to account for the fever usually attendant upon these diseases, on any other principle than that of mere irritation.

The article *Epispastics*, we confess, disappoints our expectations; whether it is because we have much to learn on this subject, which Dr. E. has not thought proper to communicate, or that he, as usual, has contented himself with stating authority, without attempting to balance the evidence, and settle the questions heretofore considered *sub judice*, we know not, perhaps it is in some measure attributable to both; yet we do not hesitate to say, that it is the most unsatisfactory section of his book: there is scarcely a man in the profession who is not in the constant practice of using them, though it must be conceded on all hands, that no remedial agent is

liable to more abuse ; there is scarcely a physician in the country who would think himself at a loss to give a good reason for their application, though it is as clearly demonstrated as any truth can be, that few remedies require greater discretion in their exhibition. They are sanative or injurious in the same disease ; the instruments of health or of death ; and whether they shall be the one or the other depends more upon their well-timed prescription, than upon any of the known effects, which they are capable of producing. In phlegmasial diseases, with barely one exception, they are remedies of course, although it is more than probable that some of those diseases not only do not require, but really forbid their exhibition. We transcribe the following remarks as a specimen of the manner in which the subject is treated.

“ The *modus operandi* of vesicatories in the cure of diseases, has been a subject of very considerable controversy. Much of their beneficial operation was formerly ascribed to the evacuation they produce. That they do some good in this way, though not so much as has been supposed, I cannot doubt. I suspect, however, that more advantage is derived from the secondary, or purulent discharge than from that which is the immediate consequence of vesication. To be convinced of the effects of discharges of this kind, we need only advert to the manifest influence which the occurrence of abscesses, or the production of artificial eruptions are known, occasionally, to produce on diseases. The suppression of a small discharge from behind the ears of children, is often followed by the most dangerous consequences, and its re-establishment is as generally manifestly beneficial. It is frequently observed too, that the good effects of blisters do not occur until the secretion of pus commences. It is, after all, highly probable, that the discharge from a vesicated surface is in the majority of cases salutary, more by its secondary effects in keeping up a new determination to the part, than by its direct influence as an evacuation. When we advert to the nature of the diseases in which blisters act most beneficially, it appears evident, I think, that their salutary operation must depend mainly on diverting the circulation from the affected organs, and directing it upon the vesi-

cated part. Thus blisters applied to the side in peripneumony, establish an increased determination to the surface, and by this effect produce a derivation from the inflamed vessels of the pleura and lungs, and enable them to recover their healthy state. A blistered surface may be considered in the light of a new excretory organ, the formation of which requires the establishment of a new current or determination of blood. So long as the discharge continues, so long will there be an especial demand of blood in the blistered part, and a consequent derivation of the circulation from the inflamed and engorged vessels of the neighbouring organs. It is by thus rendering a constant supply of blood necessary in blistered parts, and thereby sustaining the local determination to the surface, and not by evacuating any morbid matter, that the discharge from blisters, for the most part, appears to do good. It is nevertheless quite probable that blisters do sometimes act beneficially by their direct depletory effects. In erysipelas, for instance, we often derive immediate and decided benefit from blistering the affected part. To explain this, as is commonly done, by ascribing it to the establishment of a new action in the part, appears to me exceedingly vague and unsatisfactory. Is not the direct evacuation of serum from the inflamed vessels sufficient to explain the advantages obtained in cases of this kind from blistering? In erysipelas the cutaneous capillaries are especially involved in inflammation. Why, therefore, should we not expect benefit from an application which is calculated in a direct way to lessen the contents of these engorged capillaries?

“Blisters have also been supposed to do good by their stimulating and cordial effects. “That these remedies,” says Dr. Chapman, “are cordial and exhilarating, is proved by their efficacy in all nervous affections, whether distinguished by a preponderance of mental or corporeal infirmity, and weakness.” It appears to be well ascertained, however, that in all cases of *real* debility, vesicating applications can prove serviceable only when employed in such a way as simply to produce a rubefacient effect; blistering under such circumstances being almost invariably detrimental. In nervous affections, attended with weakness, blistering is without doubt often beneficial. But it must not be inferred, that the good effects of blisters in such cases are in any particular degree dependent on their “cordial or exhilarating” operation. For it is to be observed, that the weakness which attends nervous affections, is frequently immediately dependent on irregular determinations to some of the internal organs, and that in proportion as we obviate such determinations or congestions, and thereby relieve some oppressed vital organ, so do we remove the weakness to

which they give rise. It is by an operation of this kind chiefly, I conceive, that vesication is found occasionally to produce invigorating consequences, in nervous affections.

“Cullen ascribes the beneficial operation of blisters to their supposed power of relieving spasm. That the skin frequently becomes moist and relaxed from vesication, is certain; but it is very questionable whether this can be properly ascribed to the direct antispasmodic or relaxing powers of such applications. By relieving pain, irritation and congestions of the internal organs, blisters may give a general healthy impulse to the various emunctories of the system, and enable the cutaneous capillaries to resume their regular action. The utility of blisters in some of the spasmodic affections, would seem to countenance the idea of their possessing direct antispasmodic powers. Their effects in this way, however, must be referred to the same operation that has been mentioned in relation to their employment in nervous affections.

“In whatever manner we may account for the operation of blisters, experience has fully demonstrated their utility in a great variety of affections. In the treatment of febrile diseases they are capable of affording very important advantages. Physicians have, however, by no means been unanimous in recommending them in fevers. Dr. Fordyce rejected them as not only useless, but even pernicious. The authority of this eminent physician has, however, not been sufficient to countervail the testimony, which the experience of the majority of the profession has brought forward in favour of the beneficial effects of blistering in fevers. In the treatment of intermittents, blisters cannot be considered as an ordinary remedy. Under certain circumstances of the disease, however, they may occasionally be employed with great advantage. Cases occur which are attended with an irritated pulse and a dry skin during the intermission, and which are found to resist the most liberal use of bark, &c. In such cases the application of blisters to the wrists or ancles, or a large one laid between the shoulders, will generally produce such a change in the character of the disease, as to enable the bark fully to display its febrifuge powers.

“In continued fevers, blisters judiciously managed are undoubtedly of great advantage. It must be admitted, however, that unless they are well timed as to the period of the disease, they are not only useless, but frequently manifestly injurious. As a general rule, blisters are inadmissible in the commencement of febrile affections. Where inflammation or dangerous congestion of some important internal organ is present, they are, nevertheless, sometimes of essential service, and may be resorted to in the very be-

ginning of the disease concomitantly with venesection and other antiphlogistic measures. But in idiopathic fever, without any evident congestions or inflammation, they seldom fail to do harm when employed before the alimentary canal has been duly evacuated, and the action of the heart and arteries moderated by proper depletory measures. There is a period in the course of continued fevers intermediate between their stage of high excitement and the appearance of symptoms of collapse, in which blisters will generally produce unequivocal good effects. This is what has been called the blistering point, an expression familiar to those who are acquainted with the writings of Rush. Those who have contemplated fevers most attentively, have noticed, that they often begin to decline immediately after the occurrence of some particular spontaneous evacuation, or on the appearance of abscesses, &c. It is also ascertained, that such "critical movements" do seldom if ever occur during the primary stage of febrile excitement. It appears, therefore, that there is a tendency in fevers, at some period of their course, to throw a more than usual burthen upon some of the emunctories, or to establish particular determinations, giving rise to hæmorrhage, abscesses, &c. as the first movement towards amendment. It is at this period in the course of febrile diseases, during which efforts of this kind are sometimes observed to occur, that blisters appear to be particularly serviceable. It is only, however, when the indications of a change of action in the system are obscure or imperceptible that vesicatories are admissible; for, during what is commonly denominated a critical discharge, they would be obviously improper. *The utility of blisters in continued fever unattended by any particular local affection, appears to me, therefore, to depend on giving an impulse to the sanative powers of the living economy, and at the same time establishing a new secreting surface, towards which the humours are especially directed.* In cases attended with symptoms of particular affection of any of the important internal viscera we employ blisters upon a different principle. In instances of this kind our object is to relieve the oppressed organ, and we accordingly apply the blister as near the affected viscus as is practicable, in order more effectually to derive the blood from the engorged or inflamed vessels. Thus, in fevers attended with delirium, and other symptoms of inflammation and engorgement of the vessels of the brain, blisters are applied to the head, not so much with a view of arresting the progress of the general disease as of relieving and protecting this important organ. Percival observes, that in fevers attended with a general disposition to inflammation, without any one part suffering more than another, blisters always act injuri-

ously. When, however, local inflammation of any of the internal organs is connected with the fever, vesication is almost universally useful. Experience, he says, demonstrates, that in such cases blistering the skin near the affected part lessens the flow of blood to it, and thus contributes to resolve the inflammation, and, consequently, the general febrile excitement.

"Blisters are very important remedies in the treatment of the different varieties of phlegmasial diseases. In acute pulmonic affections especially, they are often indispensable. Some difference of opinion exists among physicians as to the proper time for applying blisters in pneumonia. It is contended by some that they do more mischief than good when resorted to before the action of the heart and arteries has been considerably reduced; while others allege that they may be advantageously applied in the very commencement of the disease. That blisters may be very early resorted to in pneumonia with advantage, I am entirely persuaded from repeated experience. Without doubt, however, they will perhaps always act with more decided benefit when applied after the vehement arterial excitement has been somewhat moderated by depletory measures."*

We hope that our indiscretion will not subject us to the charge of dulness, but if it does, we cannot help it; we confess that we are unable to perceive the point of the above reasoning, the truth which it might be calculated to teach, is stated in terms so equivocal as to leave us in doubt as to the intention of the author: no point of doctrine is inculcated, nor is there any practical inference rendered obvious: the clause which we have rendered in italics conveys no information at all, or if it does, it is of a kind that might have been new some centuries ago, and such as a modern physician would study to forget rather than to remember. We know but of three ways in which epispastics can be serviceable, viz. preventing or relieving congestion; breaking up the catenation of associated morbid action, by furnishing a source of irritation, differing in its character and consequences from that which constitutes the disease; and furnishing a moderate stimulus to excite the *vis vitæ*, in order to procure facilities for the administration of other remedies, in

* Strange language to be held by any person professing definite opinions.

which last case they may more properly be called rubifacients; one or other of these ends must be had in view whenever recourse is had to their exhibition. The doctrine is easily expressed and readily understood; the difficulty is in ascertaining *the time when* and *place where* they may be applied without the hazard of adding to the febrile excitement already existing, or producing an increased determination to parts which are already in danger of suffering from inflammation. On these points we should have been pleased to have been informed, but they are precisely those upon which Dr. E. seems to have bestowed the least attention; and we regret it the more, as we know that these subjects do not receive, with the great majority of practitioners, that degree of consideration they merit, and without which it is impossible that they should not abuse the remedy.

Diuretics. The next subject noticed by our author, is that class of medicines calculated to increase the discharges by the urinary organs; and here he seems to have insisted, at considerable length, upon the rationale of their operation; assuming as a principle, that effused fluids must re-enter the circulation in order to their evacuation by the various emunctories. As this is one of the favourite topics of Dr. E. we will transcribe some of his remarks that the reader may judge of the success with which he maintains his position.

“ With regard to the latter mode of producing diuresis, that is, by exciting the action of the absorbents, and inducing a repletion of serous fluid in the blood-vessels, it will be proper to be more explicit. The emunctories of the animal system, are the outlets to the effete matters, or the superabundant and imperfectly animalized fluids circulating in the blood-vessels. They are “ the scavengers of the animal economy,” whose action is in proportion to the quantity of the materials which they have to eliminate. If the blood be drained, of its serous portion by dropsical effusion, the skin and kidneys, being less excited to active excretion, on account of the deficiency of the materials which they are destined to remove, become inactive, whilst the exhalants from which the

dropsical effusion takes place, continue by a sort of vicarious office to separate from the blood its watery portion.

“ If in this state we prescribe a remedy whose effect is simply to excite the secretory vessels of the kidneys, as, for instance, squills, we will seldom produce any augmented secretion of urine, because, the necessary materials for the secretion of the urine do not exist in sufficient abundance in the blood. If, however, we unite with this simple diuretic, another article, possessing the power of exciting the re-absorption of the effused fluid, we at once stimulate the vessels of the kidneys, and furnish them with an augmented portion of the materials of secretion. It is on this account that we often derive so much advantage from the union of squills and calomel in dropsy ; and it is upon the same principle that the action of diuretics is increased by copious draughts of mild diluents. The system appears to be equally incapable of bearing with impunity, either too small or too large a portion of serous fluid in the blood. As soon as this part of the circulating mass becomes more than ordinarily augmented, the kidneys or the skin are excited into action to reduce its quantity ; and hence, we often excite the action of the kidneys, by indulging our patients in the free use of mild drinks. But although diluents are certainly useful, in cases of dropsy, to excite the action of the kidneys, yet when once this effect is produced, and the absorption of the effused fluid takes place, they ought to be less liberally used, since, by supplying the blood-vessels with a sufficient quantity of watery fluid, there will be a less demand made upon the absorbents, and, consequently, a slower reduction of the dropsical effusion.

“ The action of diuretics is also promoted, in full and phlogistic habits, by whatever lessens arterial excitement, or diminishes the quantity of fluid circulating in the system. Thus, bleeding and cathartics are often of essential service in this way. To some there may appear to be a contradiction, in this statement, to the one made above, that copious draughts of diluents increase the efficacy of diuretics, by furnishing the vessels with a more abundant share of watery fluids. The fact, however, is otherwise. In opposite states of the system these contrary means produce, indeed, precisely similar results. They both increase diuresis by favouring the absorption of watery fluid. The only difference that subsists between bleeding and plentiful dilution in this respect is, that the former increases the activity of the absorbents, and lessens the rapidity of serous effusion, whilst the latter acts simply by furnishing the absorbents of the alimentary canal with a greater quantity of fluid for absorption. It must also be observed, that bleeding and cathartics can only be useful for purposes of this

kind, when the blood-vessels are full and active, whilst, on the contrary, copious draughts of bland liquids are particularly suitable, where the system is less plethoric, and the blood has already been much exhausted of its serous portion. We find no difficulty in understanding how the discharge of urine may be promoted, by the plentiful use of water ; but of the manner in which depletion, or the reduction of arterial excitement, acts in increasing the vigour of the absorbents we know nothing. The fact, however, is fully ascertained, not only by the effects of bleeding and purging in the treatment of dropsy, but also by the direct experiments of Magendie, who has recently demonstrated, what, indeed, has been noticed before, that absorption is accelerated or retarded in proportion as the quantity of fluid circulating in the blood-vessels is increased or diminished.

“ How an increased secretion in the kidneys can reduce dropsical accumulations, is difficult to perceive. It cannot be wholly from any direct action which diuretic remedies may exert on the absorbent system ; since we have it from very high authority that dropsies have been cured by the free use of diluent drinks alone ; and it will hardly be contended, that such a remedy could exercise any direct influence over the absorbents. I am inclined to believe that the explanation must be sought for in the following circumstances. When the discharge from the kidneys is much increased, in a case of dropsy, we not only determine the serous discharge to these emunctories, but lessen the general mass of this portion of the blood, and, consequently, lessen the effusion from the exhalants furnishing the dropsical fluid. Now, if the exhalation from these vessels be diminished, and the regular discharge from the kidneys be re-established, the dropsical accumulations must gradually disappear, although the absorbents remain in the same condition, with regard to the degree of their activity. But independent of this effect of diuresis in diminishing accumulations of effused fluids, there are other results which we have reason to believe take place, concomitantly with those just mentioned, and which still further increase the efficacy of diuretics in dropsy. I have stated above that depletion favours, in a very decided way, the absorption of fluids ; hence when the blood-vessels are suddenly deprived of a portion of their serous fluid, by the action of a diuretic, nature, making an effort to sustain the necessary proportion of this component part of the circulatory mass, excites the absorbents into more vigorous action, in order to supply the deficiency which the animal economy experiences.”

We know not what opinion our readers may form of this

reasoning, but to us it appears that there is too much hypothesis mixed with the facts. The leading fact, viz. that adduced as the result of the experiments of Magendie, is either not properly understood, or at variance with the observation of every day's experience. If we had not anticipated, when speaking of *cathartics*, some remarks which would be applicable here, we would proceed to show, that the reasonings, however ingenious, are by no means satisfactory. It is not in evidence that the blood in dropsy is drained of its serous portion, or that the balance of its constituent parts in this respect is materially altered; and if it was, and the skin and kidneys from this cause should lose their accustomed stimulus, or "raw material," as Dr. E. expresses it; it would be difficult to assign the reason why the exhalants which open into cavities, should not be affected by the same cause, and cease to *exhale* even their ordinary quantity so soon as they should cease to *secrete* their healthful proportion; seeing that the action of them all is made to depend upon the amount of serous fluid present in the blood. That the exhalants in dropsy ever perform a vicarious office for the kidneys is also extremely doubtful, as the effusions for the most part (perhaps in all cases) are accumulations resulting from a passive state of the exhalant arteries, depending upon a debility of the blood-vessels; and the fluid secreted by the kidneys, is the result of an active process in a set of organs peculiarly fitted for the purpose which they are intended to answer in the animal economy, and one widely different from that of merely separating from the blood its serous portion. The fluid extravasated in abdominal dropsy, 'tis true, is very frequently urinous; but this, so far from being a reason for the opinion that the exhalants perform a vicarious duty, is no slender support for the position that a large part of it is derived from the urinary system, after it has been submitted to the process of secretion, by a retrograde action

of the absorbent vessels : but without such a supposition, it is readily explained, by the absorption of its more fluid parts during its retention. That the absorbents of the urinary apparatus are peculiarly active even in the most aggravated cases of dropsy seems probable from the circumstance, that the quantity of urine voided is always small, highly coloured, and peculiarly irritating to the urethra ; and that it is not secreted of this quality, is fairly inferible from the fact, that a similar change passes upon it whilst the system is suffering under an attack of inflammatory fever, when the whole absorbent system is known to be peculiarly and morbidly excited.

We have long been of opinion, that a diminished secretion of urine makes no part of the disease called dropsy ; we do not deny that it ever has place, but we are confident that when it does obtain, it is justly chargeable to causes which have no necessary connexion with the disease ; and if this was the proper place to discuss this question we would willingly assign our reasons at length. We assure Dr. Eberle that we are not disposed to dwell upon this part of his book from a wish to bring our own opinions publicly in collision with his ; we have another and a higher motive ; we believe that the pathological view which he has taken of dropsy as introductory to the rationale of the operation of diuretics, is not only not exactly correct, but so wide of truth as to lead to very injurious results if rigidly applied to the treatment of diseases. It is not true, that the blood in dropsy is *drained* of its more fluid parts, if by using the term draining he means to convey the idea, that the blood, after effusion has taken place, is less fluid than it was before. It is not true, that the exhalants opening into cavities perform an office vicarious for the kidneys ; neither is there any evidence that these functions are so deranged as to render such service necessary. It is more than doubtful, whether mere

diluents are remedial in dropsy by virtue of any power they possess of exciting the action of the kidneys ; the best article of this class is water, which, to be good, should be insipid, inodorous, colourless, and void of any stimulant quality which would render it capable of producing excitement in any organ to which it may be applied ; and when serviceable in this disease they are only so in cases which result from the intemperate use of ardent spirits, where, by being made to supply their place, the system is necessarily relieved from that excessive stimulation, which produces and maintains the diseased action. And as a general position, it is not true, that this disease is attributable to a deficiency of power in the absorbent vessels connected with increased exhalation of the capillaries of the parts in which the effused fluid is situated ; for our remedies for the most part are directed to the first passages, without reference to their particular direct agency upon the absorbent system, and they are generally successful where there is no organic derangement ; and where there is, those remedies calculated to increase the activity of the absorbent vessels are usually unavailing. We cannot dismiss this subject without a remark expressive of our surprise, that Dr. E. should, in more places than one, quote the experiments of Magendie as authoritative for the assumed fact that absorption is promoted in proportion as the fluid circulating in the blood vessels is diminished, while he himself observes, that bleeding and cathartics are only useful for purposes of this kind (increasing the activity of the absorbents and lessening the rapidity of serous effusion) when the blood-vessels are full and active. That Dr. E. is right there can be no question, and he might have armed his opinion with testimony infinitely more conclusive than the experiments of Mr. Magendie which he here qualifies ; the fault lies in offering us both the opinion and fact, without a single remark which would

enable the reader to scrutinize the one, or distrust the other, and it is the more to be regretted as the practical import of them is of incalculable consequence in the treatment of hydropic diseases. The truth is, the experiments of Mr. Magendie to which Dr. E. especially refers, if severely examined, will scarcely allow of any practical inference which can apply to the treatment of these diseases: he believes what Dr. E. very much inclines to doubt; that there is no such thing as lymphatic absorption, and that the process of absorption is altogether carried on by the agency of the venous system; his experiments were made on dogs, and with poisonous substances; and such were the effects, as might reasonably raise a question whether there was a necessity for the material being absorbed at all. The theory of dropsy as taught in the book before us is made to depend mainly upon the assumption that the blood has submitted to a change in the proportion of its constituent parts, caused by a diminished or impaired secretory action of the kidneys and skin, which ceasing to perform their accustomed functions in a healthy manner, necessarily occasion a redundancy of serous fluid in the circulating system; but "as the system is incapable of bearing with impunity too small or too large a portion of serous fluid in the blood," it relieves itself by instituting a vicarious action of the exhalants to compensate for the deficiency of action in the kidneys and skin; which constitutes the disease: and as the increased action of the exhalants must drain off the serous portion of the blood, the deficient action of the skin and kidneys becomes in its turn a consequence of the disease which they at first created, by reason of the blood being so deprived of its serum as not to afford the material from which the matter of transpiration, and the urine is formed. The doctrine, it is true, is not exactly expressed in these terms, but no other inference can be drawn from Dr. E.'s language in the explanation given

of the operation of diuretics ; and we object to it, as not conformable to fact ; and of no possible use in framing any successful plan of treatment for its cure : and it appears to us, that Dr. E. has involved himself in a labyrinth of inextricable difficulty, by attempting a solution of the phenomena of this disease through the agency of humoral doctrines. If the rationale be the correct one, upon what principle shall we account for the success attending the treatment of this disease by cathartics and tonics solely, without the assistance of any remedies calculated to increase diuresis, or to promote absorption through any other means than those which may be supposed to act intermediately, by giving tone to the general system after the evacuation of the extravasated fluid ? Dr. E. has no doubt often witnessed the beneficial effects of hydragogue purges, and has seen gallons of water passed per alvum through their agency ; and he surely would not contend, that it is derived from cavities where it was extravasated, through the medium of the absorbent system merely reconveying it to the blood-vessels, in order that it may pass by the exhalants of the intestines ; the rapidity of the process absolutely forbids such a supposition, and if he allows in any case the inverted action of the absorbents to be instrumental in the cure we can see no reason why he should pertinaciously deny the operation of the same cause in the production or aggravation of the disease itself. We are prevented by necessity from insisting longer on this subject, and we assure the reader that we should not have detained him so long had it not been from a conviction of duty ; it is impossible, within the limits assigned us, to treat the doctrines taught in this book with that minute attention which their importance merits, and merits the more, inasmuch as they, with inconsiderable variation, are the theoretical data which the students of this university are taught to believe to be the only sure foundations upon which their

pathological reasonings must rest. If we had lived two hundred years ago we might have admired the ingenuity which could frame a system so perfect as that here taught, notwithstanding its manifold deficiencies ; but we hope we may be excused for withholding our assent to the principles inculcated in this book, so long at least as we are certain that they cannot explain the phenomena of disease without violence to facts known to be matters of common observation.

We must here close our remarks, and in conclusion would observe, that the work is peculiarly valuable to all such readers as possess sufficient medical sagacity to scrutinize the doctrines, and test the value of medical evidence ; the facts are numerous, and practical authorities abound ; but the reader is left with the measure of information he may possess, to balance their conflicting testimonies. The author has left out of his catalogue of remedial agents some hundreds of articles which have heretofore lumbered the pages of works of this kind, and deserves, and will no doubt receive the thanks of every rational practitioner who frames his plan of treating diseases upon broad pathological principles. As an elementary work we believe it calculated to teach a theory of physic which will be, as it has always been, very inconvenient in its application to practice : and as a work upon which to rest the reputation of a severe, discriminating, and intellectual physician, we fear it will disappoint the expectations of the author's friends, though it bears ample testimony to his patience, industry, and perseverance.

Mémoire sur l'Auscultation, appliquée à l'étude de la grossesse, ou Recherches sur deux nouveaux signes propres à faire reconnaître plusieurs circonstances de l'état de gestation. Par M. J. A. LEJUMEAU DE KERGARADÉ, M. D. p. 43. Paris.

The stethoscope of Dr. Laënnec, of Paris, has enabled practitioners to ascertain with considerable exactness the different lesions of the pulmonary system; its employment will, in all probability, be productive of the most important results, by affording the practitioner the means of adapting his remedies to the different morbid conditions of the respiratory organs, and thus succeed in removing many of them before they become complicated and incurable. This means has more recently been applied to the study of pregnancy by Dr. De Kergaradec, of Paris, who has published a memoir on the subject, the title of which stands at the head of this article.

From numerous trials made on pregnant women it appears, that by applying the ear to the abdomen, or by means of a stethoscope, the *fœtal* pulsations can be heard as early as the fifth month of pregnancy; and are to be distinguished by their double stroke and great frequency, being from 120 to 160 in a minute. The *placental* pulsations are distinguished by their single stroke, being synchronous with those of the maternal circulation, and attended with a sort of whizzing noise (*souffle*) as is heard in some diseases of the heart and large arterial trunks, and as if the blood was flowing through a very large canal, or many of them at the same time. M. De Lens, a collaborator with the author, thinks that the placental pulsations may be distinguished as early as the third month of pregnancy.

The following case from the author's memoir will enable the reader to form some idea of the kind of information to

be derived from this means in ordinary cases, and of its degree of certitude :—Madame L. was nearly at the end of her gestation when the author attempted to ascertain the condition of her pregnancy. On approaching his ear to the abdomen, he heard pulsations which seemed to him to resemble the beats of a watch, and which, after repeated trials, he was inclined to attribute to the contractions of the foetal heart. He found that they were perceptible only on the left side of the abdomen, from a few inches below the umbilicus down almost as low as the crural arch, and that they ceased to be perceptible on the left side quite behind, and before, past the linea alba. During the fifteen days he continued his trials, the pulse of the woman varied from 54 to 72 in a minute, and the double pulsations of the foetus from 123 to 160. On one occasion the foetal pulsations were so frequent that they could not be counted, whilst there appeared no change in the mother's circulation, nor was she affected with any emotion or pain to which it could be attributed. One day, in endeavouring to discover the foetal pulsation on the right side of the abdomen, he discovered in a circumscribed part below the umbilicus, distinct, regular, and single pulsations which were synchronous with those of the maternal circulation, and attended with a whizzing noise as if the blood flowed through large canals. He was led to conclude that this pulsation proceeded from the placenta, and that it adhered to the uterus at this part. These pulsations were not always perceptible; sometimes they ceased for several days in succession, and then again would become as evident as ever. These variations, he thought, were owing to the changes of the foetus sometimes affecting the placenta. During labour, at the time the os tincæ was dilated to nearly the size of a half dollar coin, the mother's pulse was 85, and the foetal heart contracted from 136 to 139 in a minute, which was perceived much lower down in the abdomen than on

former occasions, and more before, near the linea alba. The placental pulsations were perceptible in the same place as before.

The indications of the foetal and placental pulsations he verified in a great number of cases of pregnancy, and many eminent practitioners of Paris have also acknowledged their validity.

The following are the principal theoretical and practical conclusions which the author has drawn from his researches :

1st. That when the double pulsation is perceptible, we may conclude the woman to be pregnant, and the child living; but that its absence does not certainly indicate the woman not to be pregnant, nor the child dead.

2dly. By auscultation we may sometimes predict the existence of twins from hearing the double pulsation at the same time in many different parts of the abdomen.

3d. It is not improbable that auscultation will eventually enable us to ascertain with some exactness the actual position of the foetus in the uterus.

4th. Auscultation will enable the operator to avoid cutting into the uterus over the part where the placenta is attached, in performing the Cesarean operation.

5th. The foetal pulsation occurring in an unusual part of the abdomen, may indicate the existence of an extra-uterine conception.

6th. Auscultation may become the means of distinguishing a false from a true conception, as in the former the double pulsation would always be wanting.

COLLECTANEA CLINICA.

A Case of Scald-Head (Porrigo Lupinosa). BY JOB HOBHOUSE, M. D., of Greeneville.

In March, 1820, Mrs. H. of a neighbouring village brought her son, aged eleven years, to me, to be treated for scald-head, which had been of three or four years standing, and had resisted various applications which the physicians of her town had successively employed. The disease extended nearly over the whole of the upper part of the hairy scalp, had here and there completely destroyed the growth of hair, and the clustered ulcers were covered with very thick, dry, whitish, circular scabs; in short, I judged it to be of that species denominated by Bateman *porrigo lupinosa*. There were numerous enlarged lymphatic glands on both sides of the neck, and some even under the sides of the hairy scalp, from the size of a pea to that of a cherry. The lad's general health did not appear to be much altered from its usual state, except that he was somewhat emaciated; he was cheerful, and his appetite continued to be good. After removing the thickened scabs by means of emollient cataplasms, and shaving the diseased scalp as close as its ulcerated state would admit, I directed the application of the tar and sulphur ointments combined, which appeared for a time to be of service, and then lost its efficacy; when I changed it for an ointment composed of the subacetite of copper and calomel; but this was attended with no better success than the former application, and I resorted in succession to the various lotions and ointments recommended in the books for this disease; both those containing mercurial prepara-

tions, and narcotics, as cicutæ, stramonium, &c., and all without being able to overcome the disease. Sometimes, it is true, the disease would appear to be nearly destroyed, but it would again spread, and become as extensive as ever; and that, too, without my being able to attribute it to any neglect in the use of the remedies. Finding the disease so obstinate, I paid more attention to the general health, and to regulating the diet. An alterative course with Plummer's pill was persevered in for some time, but without producing any benefit; and I, finally, determined to change my treatment entirely; to endeavour to mitigate the disease by soothing, mild applications, and to commit the case to time, and change of habit to do the rest. Accordingly, I directed the scalp to be again shaved, the head to be washed every morning with a warm solution of mild soap; a large warm bread and milk cataplasm, changed thrice every twenty-four hours, to be kept constantly applied over the diseased part; the heat of the cataplasm to be retained as far as practicable by means of a warm cap; and the bowels to be kept freely open by the occasional administration of a saline laxative. In something less than four weeks after the adoption of these simple means, I had the satisfaction of seeing the disease totally eradicated. The enlarged glands of the neck gradually diminished in size, and finally returned to their natural state; and the lad has since continued free from any disease of his head.

The only two cases of scald-head which have occurred in my practice since that time, one of which I considered the *porrigo farvosa* of Bateman, and the other, the *tinea granulata* of Alibert, which Bateman, I think, without just reason, considers a variety of the *porrigo scutulata*, were treated by the same method, and with the same success.

It is not my intention to inculcate the employment of emollient applications as a new remedy in these cases, or a

remedy that is adapted to, and will succeed in, every species of the disease. I know very well, that every author who has treated on this disease, speaks of their employment as preparatory to the use of other remedies; and that M. Alibert especially appears to place most value on them, than any other author with whom I am acquainted. He admits that the best remedies are the mildest; such as are calculated to allay the irritation of the inflamed part: but no one, not even he, has thought of depending on them solely, and judged them capable of removing the disease when the most approved stimulant applications had totally failed. Neither am I so sanguine as to expect that they will invariably prove equally efficacious as in the three cases which have occurred in my practice; but their more general use, persevered in for a considerable time, would often, I am persuaded, be followed by the desired result; and, in other cases, bring the disease into that state in which it would readily yield to stimulant topicals. My practice every year convinces me more and more of the superior excellence of emollient cataplasms in the greater part of external inflammations, over topicals of a more harsh and stimulating character, which practitioners of this country and those of Great Britain, are so much in the habit of employing. The French, I think, understand this matter better, and frequently succeed by the warmth and moisture of cataplasms in overcoming diseases which are intractable under our stimulant powders and ointments. The strong and unqualified language in which the late Mr. John Bell spoke of the abuse of emollient cataplasms, has doubtless contributed to render us more circumspect in their employment; nor is this the only error that this eloquent writer and bold operator, has inculcated, by his sweeping and positive manner of asserting, what ought rather to be given in the more modest form of doubtful and individual

opinion. But it is not my intention, on the present occasion, to show the advantages of a more general employment of cataplasms; I propose to take up this subject on some future occasion, and make it the subject of a future communication to the Editors of the Medical Repository.

A Case in which a large Biliary Calculus was extracted from the Gall-bladder by an Operation. BY M. LAROCHE, Surgeon of the Hospital of the Royal Guards of Paris.

Louis Hutten, a pedlar, aged 38 years, of a small stature, meager habit of body, and swarthy complexion, consulted M. Percy in September, 1820, for a fungous tumour situated between the lower edge of the rib and the xiphoid cartilage. The tumour was red, resembling a large cherry, soft, bleeding on the least touch, and continually distilling a viscid, yellow, and bitter fluid, which was, indeed, bile nearly pure. The patient said he had been in ill health for nearly eight years, had suffered repeated attacks of hepatitis, and that the fistulous opening in the tumour had taken place six years ago, during his last attack of hepatic inflammation. He now complained of loss of appetite, obstinate costiveness, seldom having alvine evacuations more frequently than once in 6 or 8 days. On introducing a probe into the fistulous opening of the tumour, a hard sonorous substance was discovered at the depth of three or four lines, which M. Percy and myself judged to be a biliary calculus, and we persuaded Hutten to permit it to be extracted. Accordingly I introduced a director, which passed into the fistula more than two inches, and then, aided by M. Percy, laid open the cavity to that extent, which brought into view about two thirds of a very large calculus, the posterior third of which

was still detained by the edge of the liver, and probably also by the undivided portion of the gall-bladder. After several exertions with a forceps, I succeeded in extracting this calculus, but not without breaking it into two fragments. It weighed, two hours after extraction, 1 ounce, 3 drachms and 60 grains, French weight, and only lost 14 grains by drying. It was very nearly three inches long, and of the figure of two cones joined at their bases. The dressing of the wound was extremely simple. The cavity was filled with lint and compresses, retained over the part by means of proper bandages. The patient, after taking a soup, returned on foot to his residence, at three miles distance. We have not since seen him, but learned, in May, 1820, that the wound had closed, leaving only an extremely small opening, from which exuded a clear, insipid, and inodorous fluid resembling saliva.

Bulletins de la Soc. Méd. D'Emulation de Paris.

Autopsic Examination of two Cases of Yellow Fever; with Remarks. By Dr. C. C. BLATCHLY, of New-York.

CASE I.—Ansel Keith died on the 21st, 8th month, (August,) and on the fifth day of his fever; his body was examined by Dr. E. S. Blatchly, Dr. Dayton and myself. His skin, at his decease, was of a bright golden yellow; some parts began to be purple as soon as he expired: he had evacuated no urine for 36 hours before death. The appearances of the contents of the abdomen were as follow: yellowness of every part; the omentum somewhat surcharged with blood, the glands of the mesentery tinged, and the mesenteric veins fuller than natural; I noticed that the liver was smaller than usual, yellowish, and so frangible that it broke or crumbled easily between the fingers; the gall-bladder was small, and

contained a thick dark coloured bile; the urinary bladder was empty, yet the kidneys evidenced no appearance of disease that we could observe; the spleen and pancreas appeared natural. The villous coat of the stomach was black, and the pigment lay loose like so much mucus on the muscular coat, and was easily separated and scraped off with the back of the scalpel. The stomach contained a pint of the matter of black vomit; near the pylorus this matter was less dark, being of an amber or reddish brown colour. On opening into the thorax, the lungs were found of a very dark or black colour, the heart small, the veins very turgid, and the vena cava when opened, discharged much fluid blood; the different membranes of these cavities were yellow coloured. On removing the cranium, the dura mater also appeared yellow, and on cutting into the brain many dark points were visible: in other respects the brain appeared natural, and so also did the spinal nerves of the lumbar region. No traces of inflammation could be discovered in the abdomen, thorax, head or spine; nearly the whole surface of the body became livid before burial.

CASE II.—Quackenbush was examined by Dr. Dayton and myself. We found this case very similar in all respects to the one just recited; the stomach contained the same kind of black matter; its villous coat had the same morbid appearances, the liver was rather small and frangible, the gall-bladder very small, and the urinary bladder entirely empty, although the patient had made no water for 36 hours before death; the lungs were also black, &c.

Remarks. The fever of Ansel Keith, as well as the other cases of yellow fever attended by my nephew E. S. Blatchly and myself, this season, (1822,) as well as formerly, would not have been deemed of a malignant type in its commencement, by a person not conversant with the causes and symptoms, as well as the peculiar circumstances accompanying

this disease, for not until near its close, do the characteristic symptoms which have been described, even by Hippocrates, become manifest. In burning fevers, says that ancient author, in the ninth section of his book on *Crises*, "a yellowness of the skin appears on the fifth day, and accompanied with hiccough, is a fatal symptom;" he also speaks of black vomiting as a fatal symptom: patients affected with yellow fever, frequently recover when the disease is unattended with this last very alarming symptom; but as the cases of fever in this city are not generally reported till black vomiting appears, unless the person has been known to have been exposed to the infecting cause, we may readily perceive why so few reported cases of this disease terminate favourably; and as the malignant symptoms characteristic of the complaint never occur 'till near the close of the malady, the doubt and uncertainty of physicians in deciding upon its nature is not to be wondered at. Patients affected with yellow fever do not always exhibit the red and suffused eye of inebriation, when first attacked; the fever is not always typhoid in its commencement, but frequently synchoid, requiring venesection as well as other evacuations within the first twenty-four hours. As the yellow fever, then, presents at first no infallible diagnostic symptoms by which it may be recognised, we are obliged to attend to season, climate, cause, and other concurrent circumstances.

1st. *Climate.* The yellow fever is most common in hot climates; in this particular, as in some others, it shows a relation to the plague.

2d. *Season.* It rages during the hot months, and ceases like plague at the commencement of cold and frosty weather.* Some malignant fevers caused also by infected airs,

* This assertion is undoubtedly too exclusive. Vide Mertens and others, who have given histories of the plague. Ed.

as the malignant fevers of camps, jails and hospitals, are not confined to hot months, or to particular climates.

3d. *Causes.* The causes of yellow fever are generally supposed to be either a secreted contagious virus, or an infectious miasm or poisonous gas of a peculiarly venemous quality, produced by putrefaction and great heat. Whether the miasmata generated in ships, sewers, grave-yards, docks, &c. be altogether different from those produced by swamps, marshes, new made grounds, &c. is questionable. If we believe the latter set of causes—miasmatic exhalations, capable of generating yellow fever; in order to form a proper judgment of a suspicious case of fever, we should inquire whether the patient has been in a foul or infected part of a city, or in a foul or infected vessel, slip, sewer, or other similar place; whether he is peculiarly susceptible to be operated upon by such causes, by having heretofore lived in a pure and healthful atmosphere; whether he is from a northern climate, or has endured the heat of a West India summer in our own climate; whether under such peculiar circumstances he has committed excesses in eating, drinking, watching, labour, &c., or been exposed to the hot sunshine of mid-day, or the cold damps of night.

The effect of high heat on the system, is, in my opinion, analogous to the use of ardent spirits; it increases the animal excitability, and thus predisposes it to be acted on by the poisonous gases of putrefaction, and to be deranged by the depressing effects of cold and damp nights. The putrid gases operate primarily by being directly applied to the sensitive extremities of the olfactory and pulmonary nerves, and the effects are more powerful and deleterious in proportion as the person is unaccustomed to their operation. The skin and stomach, however, are not to be considered insensible to their deadly influence; for as the stomach is a kind of centre of action of the vital sympathies, it has always

been noticed to be particularly affected in malignant fevers; hence a belief was once prevalent, that the poison of contagion or infection was swallowed in the saliva, and thus the whole system became deranged in the same manner as by the introduction of a mineral or vegetable poison. This belief was once maintained by Dr. Edward Miller of this city, though at a later period, in his *Remarks on the Sympathies of the Stomach*, he rejected it.

I am of opinion, that the poisons of yellow fever, and plague, operate on the nerves in the same way as do the bites or stings of venemous reptiles. Life is sometimes destroyed with very malignant symptoms from the bites of some spiders and serpents; as the asp, viper, adder, cobra de capello, &c.; the parts bitten, and often the whole body swell, become livid, yellow and mottled; with great debility and torpor; blood oozes from the gums, lips, nose, &c.; vibices and petechiæ appear on the skin, followed by a hasty dissolution, and similar appearances are exhibited in the internal parts, on dissection. Bruises, are all at first, livid, and afterwards yellow; and the pressure which infants suffer in the birth, is followed by yellowness of the skin in many cases; which Brechat, from microscopic observations, is convinced, is the effect of bruises; we may, therefore, very rationally conclude, that the yellowness and livid appearance consequent upon venemous bites, and some malignant and pestilential fevers, are attributable to the transfusion of blood or its serum, into parts which it ought not to occupy, and into which it enters on account of the debility, torpor and patulous state of the capillary blood vessels; and that this yellowness ought not to be imputed to the absorption of the bile. If this opinion be correct, it is improper to denominate yellow fever by the term typhus icterodes, thereby implying, that the yellowness is to be attributed to the effusion of bile throughout the system. The disease is also misnamed typhus,

for in its commencement I have certainly found it synochal, and treated it as such with success. I then bled moderately, afterwards vomited the patient, gave a cathartic, and kept up a diaphoresis, with a lax state of the bowels, 'till a state of collapse, with the disappearance of the fever, authorized stimulants, tonics, warmth, and nutritious diet. Emetics I have found to be inadmissible after the face and eyes assumed a yellowish tinge, or after the stomach had manifested that state of irritability which disposed it to frequent efforts to eject; but before this state, my experience teaches me, that it requires powerful emetics to produce evacuant effects. After the typhoid symptoms have set in, this treatment would be not only dangerous, but fatal. This stage is attended with great relaxation, and irritability of the stomach, which is sore and painful on pressure, and much disposed to repeated efforts to evacuate its contents; the skin is now cool, pulse natural, weak, or slow; and there is yellowness of skin, and black vomiting. This last symptom is not invariably fatal, as I have succeeded in saving two patients after its appearance, by the exhibition of powerful internal and external stimulants.

The tenderness, irritability, and sense of soreness of the stomach; the vomiting which follows the great excitement; and the difficulty of procuring an emetic effect on the first day of the attack of the fever; all show the similarity of these cases to those of great prostration induced by a large dose of laudanum, or a heavy draught of ardent spirits: they both prevent the operation of emetics at first, although in less than twenty-four hours afterwards, great debility and irritability attended by vomiting and soreness at the scrobiculus cordis certainly ensue.

I am inclined to believe, that the emptiness of the urinary and gall bladders; the want of reaction in the kidneys thirty-six hours before death, and probably the same want of secre-

tion of bile; the small size of the liver noticed by some; the extravasation of blood from the capillaries producing vibices, petechiæ, yellow or livid skin, hemorrhages from the nose, gums, and inner coats of the stomach, (which last is probably the cause of the blackness of its villous coat, of the lungs, and of the matter of black vomiting,) do all arise from excessive torpor, debility, relaxation, and the departing vitality, in the moribund subjects of yellow fever.

INTELLIGENCE.

• • •

Notice Historique sur le Docteur Jenner, &c. Par le Docteur LOUIS VALENTINE, Chevalier des ordres de St. Michel, et de la Legion d' Honneur, &c.

Une Vérité appartient à celui qui la prouve.—LA HARPE.

No man ever conferred on the human race, or ever bequeathed to mankind, a more beneficent gift than Jenner, the immortal discoverer of the properties of the Variola Vaccina. Although perhaps no transcendent talents were required in pursuit of this object, yet the more efficient aids of a clear and penetrating mind; a sound judgment, by which he turned to advantage local opportunities, and a philanthropic heart, were the prominent traits of his character. As his celebrity is founded on his claims to universal gratitude, the anomaly need not surprise, that his life and labors should have already become the theme of encomium in a nation, the inveterate rival of the one which proudly boasts of having given him birth.

The "Historical Notice" was written by a particular friend and admirer of Jenner, L. Valentin, a physician well known in this country from several years residence and professional

practice, who left here for Europe at the period of the first experiments on the nature of the Variola Vaccina. He passed over to England, visited Jenner, travelled through the several counties where the vaccine virus was obtained or suspected to exist; and by investigating the probable sources of this prophylactic, traced it to that peculiar disease of horses, termed the grease. The interchange of respect and reciprocal confidence between Jenner and Valentin, was a passport for the latter to an acquaintance with those fellow-labourers of the former who had assisted the modest physician of Berkley in introducing vaccination into general practice. Carro of Vienna, Sallo of Italy, Woodville of America, and Valentin of Nancy, formed, as it were, a college of trustees for the distribution of this preventive throughout the world.

This Historical Notice is a fine collection of facts, anecdotes, and experimental observations with which every physician should be acquainted. Communications of a friendly and scientific nature continually passed between Jenner and Valentin; their correspondence was not interrupted by the long and obstinate war between France and England, even while the French government opposed the erection of a monument to commemorate the Jennerian discovery; a project toward which M. Valentin had induced the physicians of France to contribute.

We find in this small pamphlet many valuable articles concerning the various pursuits of Jenner in medicine and philosophy; chiefly on his speculative views of Angina Pectoris, (the disease to which Hunter, his celebrated tutor, fell a victim,) as an ossification of the heart; and on the transmissibility of the contagion of small-pox to the fœtus of an unsusceptible mother. These interesting subjects, joined to a history of the personal notice, honorable regard, and the testimonials of respect, which the sovereigns and learned

bodies of different nations have bestowed upon that great benefactor; form a collection which could not be abridged without injury, and which we hope to see presented to the American public entire.

PASCALIS.

Universal College of Medicine.

We find in the *Observateur des Sciences Médicales of Marseilles*, (February, 1823,) the outlines of a plan for an Universal College; it is attributed to Dr. Felix Pascalis of this city, Associate of the Royal Society of Medicine of Paris, &c. &c. It appears to have been communicated by L. Valentin, M. D.. Corresponding Member of the Medical Society of Marseilles, who is understood to circulate the proposals for this institution, embracing the following particulars:

1. It is proposed to adopt an uniform medical system, or nosological nomenclature for the express purpose of communicating facts, essays, discoveries and improvements in the healing art.

2. To make it obligatory on the members of the College to diffuse all such useful knowledge as appertains to any of the branches of medicine or surgery among all civilized nations.

3. To determine the best sanitary regulations, with reference to season and climate, for inland or maritime commerce, and to advise all regular governments thereon.

4. To establish an uniform system of medical jurisprudence, police, and ethics, and to hold the members bound to the observance of its statutes.

5. To qualify, protect, and recommend, medical observers, explorators, and scientific travellers in every part of the world,

and to publish their researches, so far as they may be either useful or interesting.

The College would embrace geographical divisions or sections of the globe, to be drawn not so much with regard to nations or governments, as to population, and the facilities of existing intercourse with large cities. Stockholm, Copenhagen, Warsaw and Berlin, might be the centres of four divisions, called Consistories for the north of Europe; Belgium, Germany, France, England, Spain and Italy, could each form a separate division; America, North and South, and even Asiatic India, three more, which would complete the twelve Consistories of the Universal College. Their organization requires a presiding conservateur, a registrar or secretary, and a treasurer, all resident in the same city, with a Consistorial Council, the members of which, though dispersed, may act and deliberate by correspondence. The Consistories to report to the Archiatic Council of the College, and to the great Dean or Archiater elected in London or Paris. This assembly to be organized in the same manner as the sectional Consistories, but to be exclusively vested with power to promulgate all general statutes, regulations, practical and medical points of doctrine, improvements, &c., to conduct official intercourse with governments, learned societies, universities, academies, &c. throughout the world.

The qualifications for membership of the Universal College, must be professional eminence, not only as acquired by the possession of academic honors, but as proved by intellectual and professional usefulness, either in literary and scientific works, disquisitions or discoveries; or in public and national schools of medicine and surgery; or in distinguished personal services, in hospitals, armies, or during calamitous epidemics.

After the formation of a Consistory, each of its members

has the privilege of granting passports or certificates of recommendation to any absenting or travelling physician, provided he procures the registry of the same, together with a fee for the institution, of——dollars. He may also recommend a candidate or candidates to the Consistory for membership.

After the formation of the Archiatic Council in Paris, or in London, and the election of an Archiater by the Consistories, each member of the college has the privilege of delivering diplomas of *association* (affiliation) to the college, provided he procures the registry of such associates in the Archiatic office, and the payment of the association fee of ——dollars.

Associates or affiliés to the Universal College, have a right to a seat in their Consistory's divisional Council, and in the Archiatic Senate they have a consultative vote by correspondence, and are entitled to a yearly copy of the registered laws and regulations. After the first deliberative act of the Archiatic Senate, no member can be received but by a Consistory, on the payment of 100 dollars at the Archiatic office.

The latin, and two or three modern languages only, are permitted to be used for the dispatch of business in the Archiatic and Consistorial offices.

The annual or biennial transactions shall be published in three modern languages; at the choice of the Archiatic Council, or in two modern languages, and in the latin.

It is expected that the funds of the Universal College will be considerable, as they must incessantly accrue from fees of numerous passports or certificates of recommendation; diplomas of association and membership; from private or national gifts; and from the sale of their transactions; it is, therefore, contemplated, that the yearly surplus shall be appropriated to the promotion of medical science, and to the

relief of such members as may, from age, disease, or accident, be placed in such circumstances as to require its pecuniary assistance.

N. B. We are desired by the original projector to state, that a list of persons disposed to form Consistories in Europe and America, is expected soon to be published for the convenience and dispatch of business.

New-York, October 10th, 1823.

Infirmary for the Treatment of Diseases of the Lungs.

Drs. Manley and Anderson, of this city, have established an institution under this name, for the purpose of treating such sick poor, who labour under diseases of the chest, as may apply for their assistance.

Whether we view this charity in relation to the benefits which it extends to the destitute patient, or to the improvement which it is calculated to produce in the treatment of these maladies ; it cannot fail to claim a large share of interest, both on the score of its usefulness and its necessity. The poor who labour under these diseases feel the pressure of penury to such a distressing extent as to create despondency, which nothing but the kind allotment of Providence, which makes them slow to believe that they are the subjects of them, could possibly alleviate ; though it is, nevertheless, true, that to this cause must be attributed much of their mortality : their medical treatment is, for the most part, necessarily tedious, and the hopes of returning health are so long deferred, as emphatically to make the heart sick ; and thence it is, that our benevolent affections in the whole circle of their exercise, cannot fasten upon a more interesting object than a *consumptive pauper*. The character of the charity

is certainly unexceptionable, and as an institution peculiarly adapted to add to our stock of medical information, and to improve the practice heretofore pursued with such various, but generally such ill success : it has peculiar claims on the physician. We understand that it is the practice of Drs. M. and A. to insert in detail the history of every case which they are called to treat, and to note, from time to time, the state of the patients, the remedies prescribed, as well as their effects ; and in all cases where permission can be obtained, to examine the bodies of all such as may terminate fatally. They have already prescribed for upwards of forty persons, during the ten weeks the institution has been in operation, and have great reason to congratulate themselves and the public on the measure of success which has attended this infant charity ; but one case has proved fatal, whilst in ten others the complaint in its incipient stage has been completely arrested ; during the continuance of warm weather the worst cases under treatment were improved, and there is now a fair prospect of conducting some even of these, to a successful issue.

Out-Door Lying-in Charity.

In the early part of the last year, the Medical Society of the county of New-York instituted an inquiry into the causes of what was supposed to be an unusual number of still-births ; the committee to whom the business was intrusted, after a considerable time, made a detailed report, in which they showed that although the number of still-born children was much greater than it should be, considering the general diffusion of correct obstetric information among those who practised as accoucheurs, yet it was not disproportionate to the population of the city when compared with other large

cities, in this and other countries. They were of opinion, however, that the mortality among newly-born children would be materially diminished if the practice of midwifery was more restricted to male attendants; having found that a very large proportion occurred in cases under the charge of midwives. The society accordingly determined to found an institution upon a large scale, under its own direction, having for its object the improvement of the condition of the poor by furnishing them gratuitous professional attendance at and after the period of parturition. More completely to fulfil the objects of the society, they have divided the city into ten districts corresponding with the number of its wards, and have appointed two attending and two consulting accoucheurs to each district, except the 6th, 7th, and 10th, the first two of which have each three, and the last four attending accoucheurs.

In order that the charity may not be abused to the injury of the junior members of the profession; they require the recommendation of some magistrate in behalf of the applicant, unless she is personally known to some member of the institution to be unable to defray the ordinary expences which must attend her lying-in.

The institution is now in complete operation, and all such as are proper objects of its attention may avail themselves of its advantages. That it will do much good, we are persuaded: we are very sure it is liable to as few abuses, perhaps fewer, than any other charitable institution in this city, and when it shall be more generally known to those whom it more immediately interests, it cannot fail to give the evidence of its benefits in the diminished amount of the bills of mortality.

Extract of a Report of the Committee of the Medical Society of the city of New-York, on an Essay on the Epidemic Yellow Fever of New-Orleans, of 1822. By J. L. CHABERT, M. D. Communicated to the Society.

This manuscript contains less speculation and theory than a former book on the same subject by the same author. He has collected many facts to good purpose, and has corrected some of his former opinions, particularly in regard to opium as remedial in yellow fever, and, upon the whole, has acquitted himself as an accurate observer.

After a long storm in August, the north wind setting in, collecting and sweeping before it the vapours of the Mississippi, and condensing them in the city of New-Orleans, created a malignant constitution of the atmosphere which produced yellow fever. This effect, in exact correspondence of time, was pointed out by many physicians, and it is the more remarkable, as in our latitudes the north wind is proved to be the most powerful agent in purifying the atmosphere.

A number of German and Irish labourers had been employed in the southern suburb of St. Mary, who, being carelessly left to their own mode of living, soon became sickly, and numerous victims served as a fomes for general infection; to this local cause Dr. C. also adds the exhalations from the Catholic and Protestant cemeteries which still more circumscribed the limits of danger in a southern direction, while adjoining sections of the city, at the distance of ten minutes walk, could be resorted to for safety; and if persons previously infected died in these parts, they were never known to propagate the disease.

In the prosecution of the task which Dr. Chabert has imposed upon himself of tracing out the etiology of this Protean epidemic, he relates that he saw the disease suddenly

fatal in a man in the hospital, while he was under examination for discharge as a recovered patient. On the other hand, in the midst of many hopeless cases, he can testify to the recovery of some under the operation of the most simple remedies : accordingly he could no longer depend on his own diagnosis and prognosis. He mentions, as an instance in corroboration of this, the case of a girl whom he supposed to be labouring under an ordinary indisposition, when black vomiting and jaundice suddenly supervened. We confess that such facts are rather calculated to promote scepticism than confidence in medical science, especially the singular results of the following cases :

A man in a state of delirium escaped from his bed, and was, by mistake, pursued as a common thief, shot at, slightly wounded, and taken. He eventually recovered from a most dangerous state of the fever. Another in the same stage of the disease fell into a well, from which he was taken out without much injury, and at the same time found cured of his fever. A lady, after the ineffectual employment of the most approved means, was recovered from a most desperate condition of the disease by the use of electricity. Two brothers just arrived in the city from the north, sickened with the fever, the one of whom soon died, and the other gave himself up to the care of a resident friend, on the condition that he should not be submitted to any regular medical treatment. He accordingly took nothing except a French patent medicine, which Dr. C. represents to have been a poison : and yet the man recovered from the disease. Finally, an adventurous medical man of New-Orleans went to St. Jago de Cuba for the express purpose of trying the effects of bloodletting in this disease. He fully accomplished his purpose, frequently carried the remedy to the extent of producing *deliquium animi*, and cured all his patients. Far from approving of these means, or advising any one to re-

sort to such strange and violent measures, Dr. C. believes that they must inevitably endanger, either the sick or the reputation of the physician; nevertheless, he undertakes to theorise on their results, and concludes: 1st. That yellow fever is a disease of irritation excited by myasmatic agents that are raised from the earth or water by great heat.

2d. That this irritation may produce death before it causes any organic lesion.

3d. That if the irritation be not timely arrested or checked, it will excite a cerebral or rachidien inflammation.

4th. That this inflammation of the brain or spinal marrow, is secondarily propagated to the liver, stomach, &c.

5th. That these secondary inflammations are not characteristic of yellow fever; for he did not find that exclusive attribute in the epidemic of 1821.

The author lays great stress on the symptoms of the simple and *proper* yellow fever; for the secondary symptoms also appertain to other diseases, hence it is, that owing to a want of proper discriminating marks in such cases, a great discordancy of results from the application of remedial agents must necessarily arise; hence, remedies which are proper and judicious in the secondary forms of the fever, must often prove abortive in the primitive form; and hence powerful and sudden shocks of the system are sometimes remedial, and cure yellow fever. Aware of the insufficiency of his explanatory remarks, he terminates his essay by assuring his readers that he will let no future opportunity of observation escape, that shall enable him to test the doctrinal points he has endeavoured to establish.

Signed

FELIX PASCALIS, M. D., Chairman of the Committee.

Prolapsus Recti.

Professor Dupuytren, of Paris, has enriched the surgical art with an effectual remedy for one of the most loathsome diseases which can afflict mankind in the two extremities of life. Aware of the inefficacy of the ordinary means for the treatment of prolapsus recti, and observing that the excision of hemorrhoides, funguses, and other tumours about the anus, frequently removed a prolapsus also when it co-existed, he concluded, that if some of the longitudinal rugæ of the internal membrane of the rectum were removed by excision, the healing process would contract and strengthen the intestinal tube precisely at that part where it was most relaxed, and required support. Accordingly he performed this operation (excising with a scissors some of the folds of the internal membrane of the rectum) in four cases, which were all attended with complete success; but one of them was attended with an alarming hemorrhage, and a second by a profuse and tedious suppuration. He was, therefore, led to modify the operation so as to avoid these inconveniences, and the method he now adopts has fully answered his expectations in every respect. It consists in removing several of the converging rugæ of the anus; a greater or less number of them, according to circumstances, and the extent of the disease. For this purpose he seizes separately with a flattened forceps the larger rugæ an inch and a half from the verge of the anus, and excises them with a curved scissors as near to the termination of the rectum as possible. Ten or twelve cases have been successfully treated in this way. In one of them the prolapsus was of ten years standing, forming a permanent tumour without the anus of six or seven inches protrusion, and of ten inches diameter, which prevented the patient from walking, and continually discharged

a mucous bloody matter, attended with tenesmus, and frequent desire to go to stool. After removing five or six of the most prominent rugæ, which was not followed with any hemorrhage, the patient remained six days without going to stool, and on the seventh day had an abundant alvine evacuation without being attended with any prolapsus. In twenty days after the operation the patient was entirely well, and enabled to take any kind of exercise without inconvenience. Professor Dupuytren thinks, that if a troublesome hemorrhage should accidentally arise from this operation, it would be safer and easier to arrest it by cauterization than by tents and compresses.

Jour. General de Médecine.

A New Remedy for Hemorrhagy.

Dr. Fenuglio, of Turin, announces, in the Turin Medical and Chirurgical Repertory, the leaves of the black muscattelle grape vine as a most efficacious remedy for arresting hemorrhage. He records three most violent cases of uterine hemorrhage, in which the remedy was quickly and completely successful. The dose is one drachm of the pulverised dried leaves, taken in broth, wine, or water. The leaves should be collected in August, only the greenest chosen, and dried in the shade. The *pulvis vitis*, taken in the form of snuff, also arrested an alarming epistaxis, in a robust young man, which had proved rebellious to many other means. The analysis of this vegetable substance affords an abundance of tannin principle, and of tartaric acid, with some gum and resin. Its composition proves its efficacy, and, besides, its employment cannot produce any unpleasant effect on the system.

Jour. Universal des Scien. Méd.

*M. ESQUIROL'S Account of a Colony of Maniacs, at Gheel, near Brussels.**

From time immemorial, there has existed in the centre of Belgium, in the Commune of Gheel, a colony of maniacs, of which little has hitherto been accurately known by the public, or the profession, till M. Esquirol visited it in 1821. The first public notice which we find of them is in 1803, when the Prefect of Dyle caused all the maniacs kept in Brussels to be taken to Gheel, as they were badly accommodated in the hospital at Brussels. The following year, a short notice of the state of Gheel, was inserted in M. Herbouville's Statistical Account of the District; in which, he says, that this "Strange traffic has been, time out of mind, the only resource of the inhabitants of Gheel, and no accident from it was ever known to have taken place." Dr. Andree is the next writer who mentions Gheel, in his work on Charitable Establishments, published in 1808. He was informed, that madness is endemic at Gheel! adding, that he had not time to examine "le fondement de ce bruit populaire," but if it be true, it will be an interesting physiological phenomenon. A still more erroneous account is given by M. Jouy, in the third volume of the "Hermite de la Chaussée d'Antin." Even the Geographical Dictionary of the Pays Bas copies verbatim, Herbouville's Statistical account.

On the 29th of August, 1821, M. Esquirol went to Gheel, accompanied by Dr. Voisin and M. Vanertbon, director of the Belgic Mint, who undertook the office of Flemish interpreter. He remained two days, walking about the village, visiting the inhabitants, and investigating the peculiarities of this singular establishment. The small town of Gheel is situated on the north angle of a triangle, formed by Anvers, Malines, and Gheel, and with some hamlets and farms in the vicinity, contains about six or seven thousand inhabitants, of

* *Revue Medicale.*

which four or five hundred are maniacs. It has only a single street, which is broad and paved; the houses are well built, but have generally but one floor. He met a maniac in the street, who was polite enough to conduct him to the parochial church, the hospital, situated near the centre of the town, and to the church of St. Amanzius, whose architecture bespoke it to be of the thirteenth or fourteenth century. Here is the shrine of St. Nymphna the Martyr, whose bones were miraculously discovered in the seventh century, and to whom the Colony seems to owe its existence; for it being discovered that St. Nymphna had the peculiar power of curing maniacal distempers, the shrine was soon crowded with devotees. Maniacs were accordingly brought thither in great numbers, accompanied by their relatives, and the inhabitants found it lucrative to board and lodge the strangers.

St. Nymphna still continues to enjoy her celebrity for the cure of mania, but her credit is, as might be expected, rather on the decline; for the old rector, who is upwards of seventy, admitted, that though he had frequently seen cures effected by the intercession of the Saint, yet these were becoming daily more rare. To obtain a cure in this way, a very great number of minute, tedious, expensive and absurd ceremonies must be gone through, which it is unnecessary to detail. The following facts are more interesting:

The relatives of the patients intrust them to the inhabitants of Gheel, under a sort of contract. The vicinity of the church is in most request for patients, though some are lodged in the neighbouring farms and hamlets; but E. Esquirol met with few beyond the town. Each inhabitant may take from one to five patients, and for the poor of the Commune an hospital is provided, in which eight or ten are received. The patients who are mischievous or unruly, sleep apart upon straw, or on a bag of chopped straw.

Those who are more harmless have similar beds to their hosts, and eat at the same table ; and, of course, those in town, though they have not so good air, have better food and better beds, than those lodged in farms and hamlets. The patients maintained at the expense of the hospitals of Brussels and Malines, are clothed in woolen stuff; the others, according to the fancy of their relatives. The greater part of them live, like the other inhabitants, on milk, butter, and potatoes. They are allowed to walk in the street, or in the country, without restraint, without fear, and even without being mustered. When they escape beyond the territories of the Commune, they are pursued by the gens d'armes, and conducted back to their homes. When any of them become unruly they are loaded with irons, both on the hands and feet ; and M. Esquirol saw one poor fellow walking in the street with his legs much lacerated by the friction of his irons. Many of them are employed to the great advantage of their hosts, in agriculture, and other simple labours. The female patients are all employed in sewing and making lace, and are exempt from all domestic services. A very small remuneration is given for such services, such as a flask of beer on Sundays, &c. The patients are not allowed to go to the parish church, but fifty or sixty of them assist in singing, and in various parts of the service, at the church of St. Amanzius. Sometimes they will interrupt the service, but this is rare. The order of the police prescribes that none of the patients must be seen out of doors after sun-set, and that none who are furious be seen out at all. Charities pay from two to three hundred francs per annum for each patient ; families pay from six to twelve hundred francs.

The administration of Brussels maintains a director at Gheel, who has officers under him, forming, with two physicians, a commission of surveillance ; pregnant female patients

are sent to Brussels, but this rarely occurs, being only in the proportion of five in ten years. He learned from Dr. Backer, who has practised at Gheel for thirty-two years, that the patients are generally incurable; suicides are rare; thirty years ago a patient cut his throat in the church during the nine days ceremony for his cure. There are more cures made in the suburbs than in the town, though it is remarkable that the patients are worse treated.

Among the most prevalent causes stated by Dr. Backer, are religious melancholy, deluded ambition, unsuccessful love, and domestic misfortunes. The most hopeless cases are those arising from religious causes. Intermittent mania is frequently cured, when the patient can be induced during the sane intervals to engage in rural labours. Monomania is sometimes successfully treated with neutral salts in aqua graminis. Vinegar is thought useful in restraining fury. The mortality among the patients is a little more than that of the other inhabitants; the females in particular, are subject to a diarrhoea of black bilious matter, which often proves fatal. These two last years, the number of patients has been about 400, the females being nearly in the same proportion as the males. About 3-4ths of the whole have full liberty to go and return at their pleasure; and they are never crowded round and tormented by the children, as would be the case in other places, and the inhabitants live in the midst of them with perfect security.—*Monthly Jour. of Medicine.*

Atmospheric Constitution, and Diseases of the City of New-York and its vicinity, during the Summer and Autumn of 1823.

The city of New-York has happily escaped the prevalence of malignant endemic fevers during the hot season of the

present year. Indeed, the last summer could scarcely be said to have been a hot season ; for the frequent and copious rains which fell during the summer months, by keeping the earth constantly wet, maintained the atmosphere in a temperate state ; so that, during the whole season, we hardly had three successive days of tropical heat. The month of September throughout was remarkably cool, attended with high winds ; the weather continually presented the appearance of an equinoxial storm, but without being succeeded by the boisterous gale of the season. The month of October was also uncommonly cool and wet, with frequent frosts from the commencement.*

The season, throughout the adjacent country, has been fruitful almost without a parallel for many years ; vegetation of all kinds luxuriant, and the crops uncommonly abundant ; none of them merely tolerable ; Indian corn or maize alone would have been better, had there been higher heat, and a longer continuance of it.

The diseases most prevalent in the city, during the months of May and June, were inflammations of the mucous membranes of the lungs and throat, which were tedious in their progress, but seldom attended with fatal consequences. During the remainder of the warm months there has been more or less of intermitting and remitting fevers, generally

* The following abstract from a Rhode Island Gazette, shows what was the character of the late summer in a neighbouring state. The weather in this vicinity could not have differed from it materially : " The medium temperature of the summer months, for the preceding six years, is 70 degrees 69 minutes, and that of the present year, 68 degrees 62 minutes ; making a difference of 190 degrees 44 minutes, for the three months. Now, we attribute the characteristic features which distinguish this season from the corresponding ones since 1817, to the frequency, as well as to the great quantity of rain, 27 days in 92 have given us water amounting to 9,31 inches. This is nearly double the average of rain fallen during the three summer months of the preceding four years. After considering the above facts, we shall probably assign the coolness of the season to its natural cause."

mild, and yielding to ordinary means; only two or three cases of remitting fever, as far as we have been enabled to learn, have assumed malignant symptoms, which gave occasion to some temporary alarm that we were about to be visited with *epidemic* yellow fever; but which concurrent circumstances, the favourable state of the weather, and the uncommon cleanliness of the city, rendered very improbable. Some few cases of yellow fever, contracted on ship-board, occurred in the city during the season. Such of the sick as were seamen, were removed to the quarantine establishment, but the others remained in the city, surrounded by their friends, without communicating any disease to the numbers that approached them.

Several cases of yellow fever occurred during the latter half of August and the first days of September, on the opposite shore of the East River, in a small cluster of buildings situated at the lower end of the village of Brooklyn, on a small space between the high bank of the island and the water's edge; where vessels are sometimes brought that are prohibited from approaching the city wharves during the hot season. Dr. Pascalis, who visited the infected place for the purpose of inquiring into the origin of the malady, informs us, that the locality at which the fever occurred showed abundant causes for such effects; that the two dwelling houses of the cluster of buildings were in a most filthy condition, occupied to crowding with the lowest class of the community, chiefly Irish labourers; that the fishermen resort to this spot in the spring season to clean and salt their fish; that the storehouses contained a great quantity of hides and salted fish; and that, besides all these causes of putrid exhalations, an overflowing sink of one of the dwellings also greatly contributed to vitiate the air, which was highly charged with offensive matter, and, in a manner, stagnant and confined between the high bank in the

rear, and the large storehouses in front. Moreover, it conclusively appeared from the Doctor's investigations, that one case at least of these fevers occurred on the 17th of August, and proved fatal on the 22d, whereas the vessel, which was accused of bringing the disease to the place, did not come to the wharf until the 28th of the same month, and that she was the only vessel that lay there during the whole of the hot season.

The inhabitants of the surrounding country have not enjoyed the same degree of health the last summer and autumn as the citizens of New-York. In almost every district of country within fifty miles of the city, from which we have heard, either dysentery, or bilious remittents mingled with intermittents, and in some places both diseases have been very prevalent. In some instances these diseases have exhibited malignant symptoms, which would have created alarm had they occurred in a seaport town; but the temperate state of the weather did not allow of their attaining that high degree of malignancy with in-co-ordinate and anomalous symptoms, which always characterize an *epidemic* yellow fever. On the whole, the occurrences of the past season do not afford a single fact to invalidate the doctrine of the myasmatic origin, and non-contagious character of our autumnal endemic, and epidemic fevers. On the contrary, they contribute, if confirmatory proof were required in the present advanced state of our knowledge on this subject, to confirm the truth of this great and salutary doctrine; salutary, because in despite of the prejudices and pertinacity of the unprofessional, it must eventually lead to the adoption of such measures, as shall at once free us from the scourge of pestilence, and our commerce, of many needlessly embarrassing regulations. We congratulate our readers on the rapid extension of this doctrine in Europe; already many eminent physicians of Great Britain acknowledge

its correctness, and the interesting discussions in which the French and Spanish physicians are at present engaged, promise the most important results; but whatever further elucidation the doctrine may receive in Europe, we may confidently assert, without wishing to undervalue the important labours of Jackson, Mosely, Devèze, and others in the great cause, that it is to American physicians chiefly that the world is indebted for the refutation of the dogmas of contagion, and that the names of Rush, Miller, Bayley, Smith, Ramsay, Mitchill, Pascalis, Caldwell and Webster, will always occupy a prominent place on the page of this successful controversy.

New-York Lyceum of Natural History.

The Lyceum of Natural History of this city, have commenced the publication of their proceedings, in periodical numbers, under the title of "*Annals of the Lyceum.*" The first number contains *A Synopsis of the Lichens near New-York*, by Mr. ABRAHAM HALSEY; *A Notice of the Pumice of the Missouri*, by Dr. EDWIN JAMES; *A Description of a new species of Cephalopterus*, by Dr. S. L. MITCHILL, and *Descriptions of new or rare Plants from the Rocky Mountains*, by Dr. JOHN TORREY. From this specimen, we augur favourably of their labours, and cordially hope they may be able to proceed as they have begun. We consider the Lyceum as composing a sound and valuable portion of the scientific stock of our country. It was established a few years since, under unfavourable circumstances, considering the actual state of the natural sciences, at that time, among us; and since then has been zealously, but unostentatiously, proceeding in its course, establishing its character in foreign countries as well as at home. It presents a very creditable anomaly when compared with many of our public institutions, in preserving its original impulse, and in meliorating continually in usefulness, in resources, and in reputation.